

Exploring Alexithymia: Reviewing at Risk Populations and Treatment Pathways

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Abstract

This thesis explores the relationship between alexithymia and co-morbid mental health concerns, with a focus on developing practical tools for improving therapeutic interventions. Through a combination of qualitative and quantitative methodologies, including smallest space analysis (SSA), exploratory factor analysis (EFA), binomial logistic regression, and thematic analysis, the research provides a comprehensive understanding of how emotional regulation deficits manifest in both clinical and non-clinical populations.

Key findings include the identification of distinct emotional processing profiles namely, the compromised child, the compromised adult, and the alexithymic, that demonstrate the spectrum of alexithymic traits. The results suggest that while early trauma is a significant predictor of emotional processing difficulties, not all individuals exposed to trauma develop alexithymia. This finding underscores the need for personalised therapeutic approaches based on individual emotional capacities and life experiences. One of the main contributions of the research is the development of a narrative-based screening tool for identifying alexithymia and emotional processing deficits. The tool was trialled in a clinical setting, demonstrating high interrater reliability and practical utility for care planning. The tool's integration into personalised therapy highlights its potential to improve therapeutic outcomes by enabling early identification and intervention for individuals with emotional regulation difficulties.

Qualitative insights from interviews with therapists revealed the challenges of working with clients who struggle to articulate emotions, emphasising the importance of adaptive therapeutic strategies. The research also provides evidence for the need to shift away from traditional self-report measures of alexithymia, which may not accurately capture the emotional experiences of affected individuals. Overall, this thesis advances both theoretical

and practical understanding of alexithymia, offering new frameworks for assessing and treating emotional processing deficits in trauma-affected populations. The findings have been disseminated through academic conferences, clinical training, and journal submissions, and have led to discussions at the governmental level on the importance of addressing alexithymia in mental health care policy.

Contents

Title Page	1
Abstract	2
Contents	4
List of Tables and Figures	9
Acknowledgements	10
Chapter 1 Introduction	12
1.1 Chapter overview	12
1.2 Understanding Alexithymia	12
1.2.1 Definitions and Origins	12
1.2.2 Prevalence	14
1.2.3 Screening tools for the presence of Alexithymia.....	15
1.2.4 Correlates of Alexithymia	18
1.2.5 The overlap between disciplines	21
1.1.6 The benefits of Narrative approaches	23
1.1.7 Gender differences	25
1.1.8 Treatment pathways	27
1.3 Rationale and aim of the thesis	28
1.3.1 Rationale	28
1.3.2 The overarching aims of the thesis.....	29
1.3.3 Summary of how the aims were addressed	30
Chapter 2 Thesis Methodology	31
2.1 Chapter Overview	31
2.2 Rationale for a Mixed Methods Approach	31
2.3 Determining an Epistemological Perspective	32
2.4 Rationale for a Clinical Population Sample	34
2.4 Patient and Public Involvement (PPI)	35
2.4.1 PPI Direct Involvement	36
2.4.2 Collaboration and Input from Stakeholders	38
2.4.3 Ethical Considerations and Building Rapport	39
2.5 Summary of External Clinical Expert Support	40
2.6 Study Designs Employed	42
2.6.1 Chapter 3 Scoping Review	42
2.6.1.1 Rationale for a Scoping Review.....	42
2.6.1.2 Summary of Methodology	46
2.6.2 Chapters 4 & 5 Narrative Theory	47
2.6.2.1 Rationale for the use of Narrative Theory	47
2.6.2.2 Summary of Methodology	48
2.6.3 Smallest Space Analysis	50
2.6.3.1 Rationale for the Smallest Space Analysis	50
2.6.3.2 Summary of methodology	52
2.6.4 Chapter 6 Exploratory Factor Analysis and Binary Logistic Regressions.....	53
2.6.4.1 Rationale for the use of Exploratory Factor Analysis and Binary Logistic Regressions.....	53

2.6.4.2 Summary of the Methodology	54
2.6.5 Chapter 7 Inter-Rater Reliability in Screening Tool Development	55
2.6.5.1 The Importance of Inter-Rater Reliability	55
2.6.5.2 Summary of the Methodology	57
2.6.6 Chapter 8 Qualitative interviews and Reflexive Thematic Analysis.....	58
2.6.6.1 Rationale for using qualitative interview and thematic analysis.....	58
2.6.6.2 Summary of Methodology	59
2.7 Study Settings.....	60
2.7.1 Qualtrics for Remote Data Collection	60
2.7.2 Stoke Community Drug and Alcohol Service	61
2.7.3 Burton Addiction Centre.....	61
Chapter 3. Exploring Alexithymia within co-morbid mental health populations: A scoping review	63
3.1 Chapter Overview.....	63
3.2 Introduction	63
3.2.1 Objectives	65
3.3 Methods	65
3.3.1 Stage 1: Identification of the research questions.....	65
3.3.2 Stage 2: Identification of the relevant studies.....	66
3.3.3 Stage 3: Study Selection	68
3.3.4 Stage 4: Charting the data	69
3.3.5 Stage 5 collating, summarising, and reporting the results	70
3.4 Results	71
3.4.1 Addiction.....	72
3.4.2 Trauma, PTSD and Stress	74
3.4.3 Depression, Self-Harm and Suicidality.....	78
3.4.4 Offending, Violent and Anti-social behaviour	80
3.4.5 Parenting.....	83
3.4.6 Psychiatric, Eating and Sleep Disorders	84
3.4.7 Treatment Options.....	87
3.5 Discussion	91
3.5.1 Limitations	93
3.5.2 Conclusions.....	93
Chapter 4. Applying Theoretical Framework Following the Scoping Review.....	94
4.1 Chapter Overview.....	94
4.2 The importance of incorporating narrative approaches within psychological research: narrative theory.....	95
4.3. The Smallest Space Analysis (SSA) Approach to Valuing Individuals within Thematic Development.....	99
Chapter 5. Utilising Smallest Space Analysis (SSA) to Apply the Narrative Approach to the Understanding of the Alexithymic Profile	101
5.1 Chapter Overview.....	101
5.2 Introduction	101
5.2.1 Aims and Objectives	106
5.3 Method.....	107
5.3.1 Participants	107
5.3.2 Procedure and Materials	108

5.3.3 Analysis	110
5.4 Results	111
5.4.1 Non-Clinical Sample	112
5.4.2 Narratives within the Non-Clinical Sample	114
5.4.3 The Clinical Sample	114
5.4.4 Narratives within the Clinical Sample	116
4.4.5 Combined Data	116
5.4.6 Narratives within the Combined Data Set	119
5.4.7 Testing the Framework	119
5.4.8 Discussion of the Narratives within the Data	121
5.4.8.1 The Compromised Child.....	121
5.4.8.2 The Compromised Adult	122
5.4.8.3 The Warrior	123
5.4.8.4 The Nurtured Child	124
5.4.8.5 The Alexithymic.....	125
5.5 Discussion	126
5.5.1 Limitations and Conclusions	128
Chapter 6. An Exploratory Factor Analysis and Regression Approach to Applying the Theoretical Underpinnings of Alexithymia Narratives to Psychological Practise	130
6.1 Chapter Overview	130
6.2 Introduction	130
6.2.1 The Current Study	134
6.2.2 Aims	135
6.3 Method	136
6.3.1 Method and Procedure	136
6.3 Results	137
6.3.1 Binary Logistic Regression	137
6.3.1.1 Difficulty Identifying Negative Feelings	137
6.3.1.2 Difficulty Identifying Positive Feelings	138
6.3.1.3 Difficulty Defining Negative Feelings	139
6.3.1.4 Difficulty Defining Positive Feelings.....	139
6.3.1.5 General External Oriented Thinking	141
6.3.1.6 General Difficulty Identifying Feelings	141
6.3.1.7 General Difficulty Defining Feelings.....	143
6.3.1.8 Difficulty Appraising Negative Feelings.....	143
6.3.1.10 General Difficulty Appraising Feelings	145
6.3.1.7 Overall	146
6.3.2 Exploratory Factor Analysis	147
6.4 Discussion	150
Chapter 7. Piloting an Alexithymia Screening tool to facilitate Early Identification of Alexithymia and Risk Consideration	154
7.1 Chapter Overview.....	154
7.2. Introduction	154
7.2.1 Current Study.....	160
7.2.2 Aims	160
7.2 Method.....	161
7.2.1 Participants	161
7.2.2 Procedure and Materials	162

7.3 Results	164
7.4 Discussion	166
Chapter 8. A Thematic Analysis to Understand the Therapeutic Influence of the Newly Piloted Screening Tool within a Clinical Setting	169
8.1 Chapter Overview.....	169
8.2 Introduction	169
8.2.1 Current Study.....	173
8.2.2 Aims	174
8.3 Method.....	175
8.3.1 Participants	175
8.3.2 Procedure and Materials	176
8.3.3 Data Analysis.....	179
8.3.4 Reflexivity.....	180
8.4 Results	182
8.4.1 Analysis	182
8.4.1.1 Profile Congruence	183
8.4.1.1.1 The Compromised Child	183
8.4.1.1.2 The Compromised Adult	189
8.4.1.1.3 The Alexithymic.....	193
8.4.1.2 Overcoming Challenges	199
8.4.1.2.1 Contradictions & Misinterpretations	199
8.4.1.3 Enhancing Clinical Practise	203
8.4.1.3.1 Improved outcomes	203
8.4.1.3.2 Adapted therapy	210
8.4.1.3.3 Recommendations	213
8.4.1.4 Intertwining Considerations	216
8.4.1.4.1 Societal norms.....	216
8.4.1.4.2 Culture.....	220
8.5 Discussion	223
8.5.1 Conclusion	225
Chapter 9. Overall Discussion	227
9.1 Chapter overview	227
9.2 Key Chapter Findings	228
9.2.1 Key findings in relation to Chapter 3	228
9.2.2 Key findings in relation to Chapter 4	229
9.2.3 Key findings in relation to Chapter 5	231
9.2.4 Key findings in relation to Chapter 6	233
9.2.5 Key findings in relation to Chapter 7	234
9.2.5 Key findings in relation to Chapter 8	236
9.3 Patient and Public Involvement.....	237
9.3.1 Benefits	237
9.3.2 Challenges.....	239
9.4 Critical Evaluation of Methodology	240
9.4.1 Scoping Review	240
9.4.2 Narrative Review.....	242
9.4.3 Smallest Space Analysis	244
9.4.4 Screening Tool Development (Quantitative Analysis)	247
9.4.5 Screening tool - Reliability and Validity Analysis	252
9.4.6 Qualitative Interviews with Thematic Analysis.....	255

9.5 Dissemination of Key Findings.....	257
9.5 Future Research	259
9.6 Contribution to Knowledge	262
9.7 Personal Reflections of the Author	266
9.8 Overall Conclusion.....	268
<i>References.....</i>	<i>273</i>
<i>Appendices</i>	<i>310</i>
A1. Original Narrative Questionnaire	310
A2 Perth Alexithymia Questionnaire	314
A3 Perth Alexithymia Questionnaire – Short Form	316
A4 Alexithymia Narrative Screening tool	317
A5 Narrative Profile Questions	317
A6 Summary of Narratives.....	321
A7 Semi-Structured Interview Schedule.....	324
A8 Reflective Questionnaire	325
A9 Content Dictionary	325
A10 Additional tables pertaining to chapter 5	330
A11 Published version of chapter 5	331

List of Tables and Figures

Table 5.1	<i>The frequency of Alexithymia symptoms reported across the non-clinical data based on the Perth Alexithymia Questionnaire</i>	112
Figure 5.1	<i>The SSA plot displaying the themes found within the non-clinical data</i>	113
Table 5.2	<i>The frequency of Alexithymia symptoms reported across the clinical data based on the Perth Alexithymia Questionnaire</i>	114
Figure 5.2	<i>The SSA plot displaying the themes found within the clinical data</i>	115
Table 5.3	<i>The frequency of Alexithymia symptoms reported across the combined data based on the Perth Alexithymia Questionnaire</i>	117
Figure 5.3	<i>The SSA plot displaying the themes found within all data</i>	118
Table 5.4	<i>Scales of Clinical Narrative Experience Themes</i>	118
Table 5.5	<i>Number of cases assigned to each Narrative</i>	120
Table 6.1	<i>The independent variables found to predict DIF-N</i>	137
Table 6.3	<i>The independent variables found to predict DDF-N</i>	139
Table 6.4	<i>The independent variables found to predict DDF-P</i>	140
Table 6.5	<i>The independent variables found to predict EOT-G</i>	141
Table 6.6	<i>The independent variables found to predict DIF-G</i>	142
Table 6.8	<i>The independent variables found to predict DAF-N</i>	144
Table 6.9	<i>The independent variables found to predict DAF-N</i>	144
Table 6.10	<i>The independent variables found to predict DAF-G</i>	145
Table 6.11	<i>The independent variables found to predict DAF-G</i>	147
Table 7.1	<i>Number of cases assigned to each Narrative</i>	164
Table 8.1	<i>Themes derived from the data</i>	182

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Chapter 1 Introduction

1.1 Chapter overview

This chapter introduces the key concepts examined within this thesis including the definitions and origins of alexithymia, its prevalence within society, the screening tools utilised to screen for it, the common co-morbidities associated with it, gender differences and current treatment pathways. These concepts are considered in the general population as well as in a variety of mental health populations. The rationale is outlined for exploring the potential role that alexithymia plays within mental health populations, the continued gaps in the literature and the implications of such gaps. The chapter concludes with an overview of the overarching aims of this thesis and how these aims were addressed.

1.2 Understanding Alexithymia

1.2.1 Definitions and Origins

In the early 1970's the psychological community was first introduced to the novel concept of "alexithymia". Sifneos (1972) coined the term to elucidate a constellation of emotional and cognitive features evident in a subgroup of psychotherapy clients. The term was a derivative of Greek terminology, which translates to a "lack of words for emotions". Within current psychological practise, this term still aptly captures the essence of this phenomenon. Central to Sifneos's characterisation of alexithymia were several salient features, that included; struggling to distinguish between somatic sensations and genuine emotional experiences, marked difficulty in articulating emotions, operational thinking which underscores a deficiency in symbolic or abstract reasoning, a pre-occupation with external occurrences over

introspective feelings, and a diminished capacity for emotional imagery. Sifneo's observations indicated that individuals displaying these traits often exhibited suboptimal responses to psychoanalytic psychotherapy, a modality heavily predicated on the exploration and interpretation of emotions and unconscious processes.

Nemiah et al. (1976) outlined a pivotal theory in relation to alexithymia positing that for emotions to transform into feelings, they must first surface in our consciousness. They articulated this distinction, highlighting emotions as rooted in neurophysiology, and feelings as the cognitive experiential facets of affect. Nemiah's (1984) subsequent work, suggested that alexithymia may stem from disruptions in the process of "psychic elaboration," which involves refining raw emotions into a spectrum of consciously experienced feelings, articulating these feelings into language, generating fantasies that both express and shape these emotions, and activating the related memories and associations (Nemiah et al., 1976, Nemiah, 1984).

Building on Nemiah's groundwork, Taylor et al. (1991) introduced a self-report measure for alexithymia, emphasising that those with alexithymia do not differ fundamentally in their emotional experiences, but rather in their ability to articulate them. This difficulty in naming emotions is seen as a spectrum present in the population. Taylor, et al (2016) later expanded this notion, associating high levels of alexithymia with impaired mental representations of emotions, which restricts not only the experience and conceptual understanding of emotions, but also the ability to regulate them. Hence, they equated clinical alexithymia to affective agnosia, a term reaffirmed by Lane et al. (2020).

The implications of clinical alexithymia are manifold, including a reduced emotional lexicon, prevalent somatic symptoms potentially linked to unresolved emotional issues, and challenges in emotion regulation (Connelly & Denney, 2007). This nuanced understanding of alexithymia underscores its impact on both personal well-being and the broader context of psychological health.

Subsequent research has expanded upon these initial findings, linking alexithymic traits to various psychological, psychiatric and medical conditions, such as depression, autistic spectrum condition, PTSD, ADHD and chronic fatigue syndrome, highlighting its relevance across diverse clinical landscapes (Preece & Gross, 2023; Luminet, Nielson, & Ridout, 2021, Gaggero et al., 2021, Pisani et al., 2021).

1.2.2 Prevalence

Taylor et al. (1994) provided the research community with standardised instruments that included set thresholds to determine alexithymia's prevalence across various populations and cultural backgrounds. Studies within the general population suggest that prevalence can range from about 13% in Finland and the United States of America (Samine et al., 1999; Taylor & Bagby, 2004), to 19% in Canada (Taylor, 2000). With France, and the United Kingdom noting prevalence rates of around 17%, and 18%, respectively (Taylor & Bagby, 2004). Taylor and Bagby speculated that these discrepancies could stem from differing cultural perceptions and interpretations of alexithymia. In clinical settings, alexithymia seems to manifest more intensely, with figures reaching 33.3% among individuals suffering from depression (Celikel et al., 2010), 52% in those with posttraumatic stress disorder (Evren et al., 2010), and 67% in individuals dealing with alcohol dependence (Thorberg et al., 2009). Studies like those conducted by McGillivray, Becerra, and Harms (2017) have highlighted

that such rates can be significantly higher in psychiatric contexts compared to the general population.

The prevalence of alexithymia among incarcerated individuals also merits attention, with research indicating notably higher rates in this demographic (Leshem et al., 2019; Hemming et al., 2021; Strickland et al., 2017). Studies focusing on North American indigenous offenders (Parker et al., 2005), female offenders (Louth, Hare & Linden, 1998), and young delinquents (Snow et al., 2016), have reported prevalence rates of approximately one-third to nearly half, which is considerably higher than the general population estimates of 5 to 17% (Mattila et al., 2009). However, as these studies often concentrate on subsets of the incarcerated population, their findings may not be universally applicable to all prison populations.

1.2.3 Screening tools for the presence of Alexithymia

Various screening tools have been developed to assess for the presence of alexithymia, The one most closely inspired by the original perspective of Sifneos is The Beth Israel Hospital Psychosomatic Questionnaire (BIQ) (Haviland et al., 2002). The BIQ is a tool that involves a structured interview format with 17 binary-choice questions that the interviewer decides upon after the session. Out of these items, less than half yielded concordance in rating and aligned with the foundational definition (Tabibnia & Zaidel, 2005). Therefore, despite its comprehensive approach, it has been subject to critique due to concerns about its consistency, the binary nature of responses, and the extensive time it requires for administration (Taylor, Bagby & Luminet, 2000; Tabibnia & Zaidel, 2005; Gustavson, 2007). These challenges have hindered its widespread adoption in clinical practice and as a reliable research instrument.

The Bermond-Vorst Alexithymia Questionnaire (BVAQ) (Vorst & Bermond, 2001), offers an expanded perspective on alexithymia compared to the BIQ. Vorst and Bermond's (2001) interpretation posits that alexithymia encompasses not just challenges in discerning and articulating emotions, but also a diminished capacity for emotional engagement. This stands in contrast to Sifneos' original notion, which did not address potential deficits in the physiological experience of emotions but focused on the recognition and verbal articulation of them. The BVAQ evaluates five distinct facets, the intensity of emotional responses to stimuli, the frequency of imaginative activity, the ability to identify emotions, the analytical understanding of emotions, and the ease of expressing emotions in words (Vorst & Bermond, 2001). It shows a meaningful relationship with the more widely adopted Toronto Alexithymia Scale (TAS-20) (Parker et al., 1993) and is regarded as having robust psychometric qualities (Müller, Bühner, & Ellgring, 2004).

The TAS-20 although originally constructed in line with Sifneos's interpretations of the condition, has been modified over time. The TAS-20 has stood as an optimal choice in the assessment of alexithymia for over a quarter-century, supported by extensive research affirming its reliability and validity (Kooiman et al., 2002; Bagby et al. 1994, 2020; Cleland et al., 2005). Nonetheless, it has not been immune to scrutiny, especially concerning its 'externally oriented thinking' (EOT) dimension, which recurrently manifests lower reliability indicators (Haviland, 1996; Loas et al., 2017; Thorberg et al., 2010). This vulnerability within the TAS-20's structural integrity invites questions regarding its capacity to encapsulate the alexithymia construct within varied patient demographics. In the forefront of this critique, certain studies have posited that the TAS-20 may disproportionately reflect negative emotional states. This potentially conflates these affective experiences with the construct of alexithymia itself, particularly within cohorts presenting with major depression, panic

disorder, eating disorders, and substance use disorders (Preece et al., 2020). This conflation underscores the need for a measurement tool that transcends the mere quantification of affect and more authentically captures the alexithymic characteristics.

To overcome such difficulties, there is some suggestion that the Perth Alexithymia Questionnaire (PAQ) may provide a resolution. The PAQ is a promising instrument anchored in the theoretical attention-appraisal model of alexithymia, heralding a potential paradigm shift in assessment (Preece et al., 2018). Yet, the quest for an enhanced evaluative alexithymia metric is not without its tribulations. Comparative analyses have thus far not substantiated a significant incremental validity of the PAQ over the TAS-20 within community samples, suggesting that the TAS-20, despite its imperfections, remains a critical instrument in the alexithymia assessment arsenal (Zahid et al., 2024).

Despite the benefits of the aforementioned screening tools, the effectiveness of self-reporting in evaluating alexithymia is a subject of ongoing discussion. This stems from the very nature of alexithymia, which includes difficulties in self-awareness and descriptive capabilities.

Addressing this concern Haviland et al. (2000) created a method called the Observer Alexithymia Scale (OAS), which again diverges from Sifneos' definition. Instead, it relies on assessments made by clinical professionals about traits seen in alexithymic individuals. The OAS, typically completed by someone close to the individual, like a friend or family member, boasts strong statistical reliability (Haviland, Warren & Riggs, 2000). However, it shows only a moderate correlation with the TAS-20 (Thorberg et al., 2010). Key alexithymic traits identified by OAS include a lack of emotional expression, affective flattening, physical manifestations of anxiety and stress, preoccupations with bodily functions, aloofness in personal relationships, and a propensity to communicate through actions rather than words

(Haviland, Warren & Riggs, 2000). These revelations beckon a more granular approach to the development of alexithymia assessment tools combining a strategy that honours the intricacies of individual patient experiences and the idiosyncratic nature of alexithymia as a psychological construct.

1.2.4 Correlates of Alexithymia

In addition to the discrepancies surrounding the assessment and identification of alexithymia, navigating the complexities of it and its myriad associations could be likened to navigating a labyrinth of psychological constructs. This condition appears to be intricately linked with a spectrum of disorders, yet these connections are marred by inconsistencies and gaps within the research. The evidence to date suggests that alexithymia intersects with addiction (Orsolini, 2020; Mahapatra & Sharma, 2018; Morie et al., 2016), trauma (Craparo et al., 2014; Franzoni et al., 2013; Zlotnick et al., 2001; Schimmenti & Caretti, 2018), and a range of psychopathological conditions (Leweke et al., 2011; Sagar et al., 2021; Henry et al., 2010), painting a picture of a multifaceted psychological trait with profound implications for clinical practice. Each associated condition including addiction, trauma, affective disorders (Marchesi, et al., 2000), and psychosomatic complaints (Shapiko, 1982), provides a unique lens through which alexithymia's impact can be viewed. For instance, the relationship between alexithymia and addiction raises questions about the role of emotional dysregulation in the pursuit of addictive behaviours (Luminet, et al., 2021). Another area of consideration manifesting from this research was determining whether addiction itself can cause alexithymia, with some scholars implying that alexithymia may have similar constructs to Anhedonia (Loas et al., 1997). Findings suggest that anhedonia and alexithymia are both related to emotional processing, yet they are distinct constructs with different characteristics and implications for mental health (Loas et al., 1997).

Anhedonia is primarily defined as the inability to experience pleasure from activities that are typically found enjoyable, such as social interactions, eating, or physical activity (Myerson, 1922). It is often associated with various psychiatric conditions, including depression (Rizvi et al., 2016) and schizophrenia (Horan, et al., 2016), highlighting a reduction in the capacity to experience joy or pleasure.

alexithymia, on the other hand, as previously defined involves difficulty in identifying, describing, and processing one's own emotions characterised by a limited understanding and expression, and a reduced capacity to fantasise (Lesser, 1981). Both conditions share similarities in that alexithymia is also linked to several psychiatric disorders, but the condition itself focuses more on difficulties with emotional awareness and expression rather than the direct experience of pleasure or joy (Loas, et al., 1997).

A study examining the relationship between alexithymia, anhedonia, and the capacity for displeasure in healthy participants found that these constructs are indeed separate (Loas et al., 1997). The study used principal components analysis and found no overlap of significant factor loadings for items measuring alexithymia and anhedonia, supporting the view that these are distinct constructs (Loas et al., 1997). Another research study conducted during the Belgian COVID-19 pandemic lockdown explored the prevalence and relationships between alexithymia, anhedonia, depression, and anxiety. Their findings further indicated the complex interplay between these constructs, but reinforced their distinct natures (Damerджи et al., 2022).

These findings suggest that while alexithymia and anhedonia may co-occur and are both related to the broader spectrum of emotional processing disorders, they represent different aspects of emotional dysregulation. Anhedonia focuses on the diminished capacity to experience pleasure, whereas alexithymia deals with difficulties in understanding and expressing emotions. Recognising these distinctions is crucial for developing targeted interventions and support for individuals affected by several conditions. These arguments are not dissimilar to the interaction between alexithymia and trauma, with existing research hinting at a complex interplay whereby the inability to process emotional experiences, may exacerbate post-traumatic symptoms, or even influence the trajectory from trauma to addiction (Chung et al., 2016).

These intersections, however, are not consistently documented or understood, with research often providing contradictory findings or failing to dissect the nuances of alexithymia's influence on these disorders. The scarcity of holistic oversight appears to have led to an inability to capture the full breadth of the condition. Moreover, the impact of alexithymia on treatment outcomes across these disorders is an area of critical concern. It's clear that alexithymia not only affects the development and maintenance of these conditions, but also their response to therapeutic interventions (Ogrodnickzuk et al., 2011). Yet, the shortage of tailored treatment approaches for individuals with alexithymia signifies a significant void in clinical care. The prevailing research underscores a pressing need for a more sophisticated understanding of alexithymia and its clinical manifestations. It advocates for a more discerning assessment approach and a concerted effort to develop targeted interventions, illuminating the path for future explorations to better comprehend and address this multifaceted psychological phenomenon.

1.2.5 The overlap between disciplines

The characteristics of alexithymia, have a variety of implications beyond psychology, one of which is its impact within medical settings. For example, the condition has been associated with heightened physiological arousal and a tendency for individuals to notice and report physical symptoms, which might otherwise be unrecognised as manifestations of emotional processes (Shapiko, 1982). For instance, recurrent stomach aches presented in medical settings can often be physical expressions of emotions that individuals with alexithymia struggle to identify and articulate (Porcelli & Taylor, 2018). Such presentations suggest that alexithymia can contribute to the onset or maintenance of several medical treatments that may otherwise not be required. However, the assessment and treatment of alexithymia pose unique challenges (Porcelli & Taylor, 2018). Individuals with this condition may respond poorly to traditional psychological treatments. Additionally, it remains uncertain whether alexithymia itself can be effectively treated, highlighting a need for greater clinical awareness and tailored therapeutic strategies (Vanheule, Verhaeghe & Desmet, 2011).

The recognition of alexithymia in applied medical settings is crucial, not only for the accurate diagnosis and management of associated health problems, but also for preventing the misattribution of symptoms to other medical conditions. This recognition is particularly important considering the overlap of alexithymia with other traits and the potential subtypes of the condition, that could influence treatment outcomes. The assessment of alexithymia, therefore, becomes a significant step in understanding and addressing a range of health issues, underlining the necessity for its distinction and acknowledgment in both psychological and medical research domains.

In addition to the interwoven complexities with mental health and medical complaints, alexithymia has been a topic of discussion within neurodiversity (Kinnaird, Stewart & Tchanturia, 2019; Poquérusse et al., 2018). The relationship between alexithymia and autism spectrum conditions (ASC) has been a subject of increasing research interest, particularly as our understanding of high-functioning autism has evolved. Early research suggested that alexithymia might be a symptom or a core feature of ASC. However, this perspective has been revised in light of evidence indicating that not all individuals with autism exhibit characteristics of it (Kinnaird, Stewart & Tchanturia, 2019). This suggests that while there is a notable co-occurrence, the two are distinct entities.

A systematic review and meta-analysis investigating alexithymia in ASC found that alexithymia is common, but not universal among individuals with ASC, with approximately half of the ASC population showing traits of alexithymia compared to a much lower prevalence in the neurotypical group (Kinnaird, Stewart, Tchanturaj, 2019). This supports the notion that there is a specific subgroup of individuals with ASC who have co-occurring alexithymia and who may have distinct clinical needs. Furthermore, the presence of alexithymia in children with ASC has also been substantiated. Studies have shown that alexithymia is substantially elevated in young children with ASC, which indicates that alexithymia and ASC may overlap in emotion processing difficulties. However, the degree of alexithymia in individuals with autism varies, and the assessment tools like the Toronto Alexithymia Scale (TAS) used in these studies capture different aspects of emotion processing challenges (Kinnaird, Stewart, Tchanturaj, 2019).

The distinction between alexithymia as a co-occurring condition rather than a feature of ASC underscores the need for holistic oversight of the current literature. It is crucial to understand

the unique clinical presentations and needs of individuals with overlapping symptomology. This differentiation is vital for developing effective treatment plans and may also guide further research into the etiological and developmental pathways of not just alexithymia but other co-morbid conditions. Similarly, research into alexithymia may provide new insights into developmental trajectories. For example, a comprehensive study on offender populations carried out within the United Kingdom revealed that up to ninety percent of prisoners had a mental health condition, and seventy percent had two or more diagnosable disorders (House of Commons, 2019).

The exploration of alexithymia within criminal populations reveals a nuanced interplay between emotional processing deficits and various forms of criminality. Research in this domain, while extensive, often grapples with methodological challenges, notably the reliance on self-reported measures like the Toronto Alexithymia Scale (TAS-20), which may not fully capture the spectrum of alexithymia's manifestations. This gap underscores the necessity of employing a more refined lens to examine the subtleties of alexithymia's role in criminal behaviour.

1.1.6 The benefits of Narrative approaches

Ioannou, Canter and Youngs (2017) contribution to the field of criminal psychology, through narrative analysis, marks a significant departure from conventional methodologies. By examining the personal narratives of offenders, they uncovered the intricate emotional and cognitive landscapes that underpins criminal actions. This approach not only provided a richer understanding of the offenders' emotional experiences, but also challenged the prevailing assumptions about the nature of criminality itself. This type of work suggests that the emotional narratives of offenders are not uniform but are instead characterised by a

diversity of themes, each reflecting different aspects of crime commissioning (Ioannou, Canter & Youngs, 2017).

The implications of this research, point towards the potential for narrative approaches to illuminate the complex interplay between alexithymia and criminal behaviour. This innovative perspective offers a promising pathway for developing more nuanced screening tools and therapeutic interventions tailored to the specific emotional profiles of those with co-morbid mental health concerns. Furthermore, it advocates for a broader application of narrative methodologies across alexithymia research, potentially enriching our understanding of this condition's role not only in criminal behaviour but also in various psychological, psychiatric and medical contexts. It is widely recognised that mental health, criminal behaviour and addiction often has a significant correlation with trauma. Furthermore, there is substantial existing literature that highlights the effects of trauma on emotional development. Therefore, it is not surprising that arguments have arisen regarding whether alexithymia is a symptom of past trauma.

The existing literature (Thorberg et al., 2011; Hamidi et al., 2010; Ghalehbam & Besharat, 2011) establishes a tentative yet compelling link between trauma experiences and the development, or exacerbation, of alexithymia. Key themes suggest that individuals with a history of trauma may exhibit heightened alexithymic traits, impacting their ability to process and verbalise emotions (Frewen et al., 2008). This connection, while pivotal, is not fully understood due to the developing stage of research and the reliance on limited diagnostic tools. The implications of these findings spanning across multiple disciplines, advocate for a holistic review to unravel alexithymia's multifaceted role in the interplay with correlated concerns. A more nuanced exploration through innovative methodologies that addresses

individual difference is essential to delineate alexithymia's implications fully, highlighting the necessity for further research to enhance our understanding and intervention strategies.

1.1.7 Gender differences

An example that highlights the importance of new and innovative approaches to exploring emotional processes can be seen in historical literature surrounding gender difference within alexithymic populations. Gender differences, or indeed gender roles have been a topic of debate for centuries, and emotional understanding is no exception (Brody, 1985; Brody, 2013; Fernández-Berrocal et al., 2012). There is a dominant body of literature implying that when considering the topic of “emotion”, those who identify as male report to struggle with emotional understanding to the same capacity as those who identify as female (Gaia, 2002). However, recent research into alexithymia, has sought to understand the potential influence of gender on its prevalence and manifestation. A review of the literature revealed a complex picture, one in which gender does not appear to be a significant contributing factor in the overall prevalence of alexithymia, but subtle differences in symptom manifestation suggest a deeper narrative worth exploring (Wester et al., 2002).

A study conducted during the COVID-19 pandemic on adolescents with depression, reported no significant differences in the prevalence of alexithymia among genders (Renzi, Conte, Tambelli, 2022). The research indicated that external factors such as school bullying, disease, and stress were more influential on the development of alexithymia than gender itself. This finding supports the argument that alexithymia affects both genders equally, challenging any simplistic notions that the condition is predominantly associated with one gender over another. Contrastingly, another study highlighted subtle, yet significant gender differences in alexithymia, particularly in the Difficulty Identifying Feelings (DIF) factor, with females

scoring significantly higher than males (Mason et al., 2005). This suggests that while the prevalence of alexithymia may be similar across genders, the specific difficulties experienced, such as identifying feelings, may vary, with women potentially facing more challenges in this area (Mason et al., 2005).

This dichotomy between the overall prevalence of alexithymia and the nuances in how symptoms manifest across genders opens a new avenue for exploration, especially in light of the increasing recognition of gender fluidity (Diamond, 2020). The concept of gender as a non-binary construct challenges traditional research paradigms and suggests that the unique experiences of individuals, coupled with any co-morbid conditions, may play a more significant role in determining how alexithymia manifests than previously thought.

The lack of gender difference amongst alexithymic populations, but the subtle differences observed in alexithymia symptomatology not only warrant further investigation but also suggest that a narrative approach to understanding alexithymia could yield valuable insights. By examining alexithymia through the lens of individual experiences and recognising the fluidity of gender, researchers can better understand the complex interplay between societal and psychological factors in the development and expression of alexithymia. Such an approach acknowledges the diversity of human experience and the limitations of categorising individuals based solely on traditional gender norms.

While gender may not be a significant contributing factor in the prevalence of alexithymia, the nuanced ways in which symptoms manifest in different individuals underscore the importance of adopting a more personalised and narrative-focused perspective within the research. This approach not only aligns with contemporary understandings of gender but also

opens new possibilities for more nuanced and effective interventions that account for the rich tapestry of human diversity.

1.1.8 Treatment pathways.

The aforementioned discrepancies may also explain the lack of clear treatment pathways for those who have alexithymic tendencies. The treatment of alexithymia is indeed a challenging area with limited conclusive research on effective interventions. However, recent studies (Norman et al., 2019; Kennedy & Franklin, 2002) have begun to explore various treatment modalities with some promising results, albeit with a need for further research to establish definitive treatment pathways.

Mindfulness-based interventions (MBIs) have shown potential in reducing alexithymia symptoms. A systematic review focusing on the effects of MBIs on alexithymia found that these interventions might have a moderate effect on reducing alexithymia symptoms, particularly those related to identifying and describing feelings (Norman et al., 2019). The review included randomised controlled trials comparing MBIs with control conditions and measured alexithymia using validated scales. Although the overall effect at certain post-baseline points was not significant, one study within the review did report a significant difference favouring the intervention group at a later time point, suggesting potential long-term benefits of MBIs in managing the condition (Norman et al., 2019).

Another exploratory approach involves skills-based treatments tailored to address alexithymia symptoms. A study explored the effectiveness of such an intervention through individual case studies over 16 to 24 weekly sessions (Kennedy & Franklin, 2002). The intervention aimed to help participants clarify and identify their emotions, suggesting that this

method could be effective in reducing alexithymia symptomology (Kennedy & Franklin, 2002). However, given the small scale and exploratory nature of these studies, more comprehensive research is required to validate these findings.

The limited research and the varying success rates of these interventions highlight the complexity of treating alexithymia and underscore the importance of personalised treatment approaches. While some treatments show promise, particularly in improving emotional identification and expression, the field is still in need of more extensive, high-quality research to establish effective treatment pathways for alexithymia.

Given the nuanced nature of alexithymia, interventions that focus on enhancing emotional awareness, expression, and regulation, such as MBIs and skills-based therapies, could offer valuable pathways for treatment. Yet, the effectiveness of these treatments can vary, and a one-size-fits-all approach is unlikely to be sufficient. Tailoring interventions to individual narratives and addressing the discrepancies in screening for alexithymia through rigorous research may provide crucial steps forward in the treatment of it.

1.3 Rationale and aim of the thesis

1.3.1 Rationale

It is evident that despite an extensive body of literature on alexithymia existing, many of these studies have looked at alexithymia in isolation alongside a limited number of variables such as criminality, trauma or specific psychological conditions. This lack of holistic oversight appears to have led the topic to become stale, with a general acceptance that measures such as the TAS-20 are sufficient despite its flaws. Similarly, whilst attempts are

being made to explore treatment pathways, the sheer number of uncertainties within the literature is generating unclear treatment routes and as such it has become a topic characterised by trial and error. Acknowledging the scant attention given to individual variance in alexithymia research and the limited detailed accounts of patient and public involvement (PPI), it is important to highlight the discourse spearheaded by Faulkner and Morris (2003). Their scrutiny, spurred by the National Research and Development Programme for Forensic Mental Health, scrutinises user engagement in mental health research, revealing a predominant reliance on minor consultative engagements and audits at that juncture. Parallel sentiments echo in Shaw's 2002 healthcare deliberations, advocating for the integration of user perspectives in all facets of healthcare delivery research.

The incorporation of service users in the investigative process has been heralded for engendering enhanced data quality, elevated relevance of research aims and outcomes, and a more inclusive and diverse participant pool (Millar et al., 2016; Newman et al., 2015; Wallcroft et al., 2009). It also promotes the use of more accessible language and fosters beneficial outcomes for both researchers and participants (Millar et al., 2016; Newman et al., 2015; Wallcroft et al., 2009). Consequently, this thesis, aspires to amplify the voices of those frequently side lined in research participation. It underscores the potential enrichment of researcher development and the intrinsic quality of the thesis through such engagement.

1.3.2 The overarching aims of the thesis.

To summarise, the aims of this thesis are:

1. To explore the existing literature pertaining to alexithymia and co-morbid mental health concerns from a holistic viewpoint to determine those who may be most at risk of having alexithymic tendencies.

2. To apply the knowledge from aim one to an identified population sample deemed “at risk” of heightened alexithymia symptomology, with the purpose of better identifying and supporting individuals with alexithymia in clinical settings.

1.3.3 Summary of how the aims were addressed.

These aims were addressed through conducting a scoping review (chapter 3) to gain holistic oversight of the topic, which led to a narrative analysis of alexithymia within a clinical and non-clinical population sample (chapter 4). The data from this was then reviewed to develop overarching narratives associated with the condition that combined lived experience with existing academic research (chapter 5). Subsequently, a screening tool was then developed from this data to complement existing assessment processes (chapter 6). The screening tool was then piloted, incorporating feedback from service users, and the professionals supporting them, to determine its effectiveness in identifying and supporting individuals with alexithymia (Chapter 7).

Chapter 2 Thesis Methodology

2.1 Chapter Overview

This chapter provides a critical overview of the methods applied in this thesis. Whilst specific details of methodology can be found separately for each chapter, the present chapter aims to give a holistic view of the methods used across this thesis, and to detail the consideration given to alternative approaches. Specifically, this chapter will provide an overview of the benefits of mixed methods, the epistemological perspective adopted, an overview of patient and public involvement, study designs used in this thesis and ethical considerations.

2.2 Rationale for a Mixed Methods Approach

In this thesis, the exploration of alexithymia within vulnerable populations necessitated an investigative approach that could handle the complexity of the subject matter. A mixed methods approach was chosen, synthesising both numerical data and personal accounts to construct a more layered understanding of the phenomenon. This strategy draws on quantitative data to discern patterns and prevalence, while qualitative insights offer depth to the personal narratives surrounding alexithymia.

The integration of data streams in this mixed methods framework aligns with the pragmatic guidance offered by Creswell and Plano Clark (2007). Such an approach is adept at navigating the dual objectives of breadth and detail. For instance, the quantitative aspect of the research might reveal how widespread alexithymia is among certain groups, while the qualitative aspect could provide context to how individuals within these groups experience and cope with the condition in their daily lives. However, the application of a mixed methods

design brings forth specific challenges. Among these is the requirement for a sophisticated level of methodological proficiency to seamlessly merge the qualitative and quantitative components of the research. This proficiency is not just in the collection and analysis of data but also in the harmonisation of findings that might initially appear disparate or contradictory (Bryman, 2006).

The thesis acknowledges that qualitative narratives may not always neatly align with quantitative outcomes. This divergence necessitates a careful interpretative process to ensure that the data complements rather than conflicts with each other. The interpretive work is delicate; it involves piecing together a puzzle where each piece may vary in shape and colour but is essential to complete the overall picture.

In sum, while the mixed methods approach demands a rigorous and nuanced application of diverse research skills, the depth and clarity it brings to complex research questions, particularly those addressing psychological constructs within societally disadvantaged populations, justify its selection in this thesis.

2.3 Determining an Epistemological Perspective

In crafting an academic inquiry through mixed methods research, one must navigate the epistemological territories that inform the process of knowledge creation. The challenge lies in harmonising the epistemic foundations, the empirical, often positivist, orientation of quantitative research that seeks to uncover universal truths through statistical analysis, and the interpretive, typically constructivist, approach of qualitative research that embraces the contextual nature of knowledge (Tashakkori & Creswell, 2007).

Epistemology, the study of knowledge, posits critical questions about what is known, the extent and certainty of that knowledge, and the means by which it can be acquired and validated (Steup & Neta, 2005). Quantitative research is traditionally underpinned by a post-positivist epistemology, which posits that while absolute truth may be elusive, rigorous scientific methods can lead us to an approximate understanding of reality (Teddlie & Tashakkori, 2009). In contrast, qualitative research is often informed by constructivist epistemology, which holds that realities are multiple and socially constructed, thus knowledge is context-dependent and inter-subjectively shaped (Schwandt, 2000).

However, the philosophical stance of pragmatism, as a response to these epistemological divides offers a third path, one that prioritises the research question and practical outcomes over philosophical allegiance to one epistemology over another (Morgan, 2014). Pragmatism posits that the value of any research finding is in its ability to inform practice and address real-world problems (Murphy, 2014). As such, it accommodates an “existential reality” comprised of both objective and subjective elements, arguing for the synthesis of empirical evidence and narrative meaning (Murphy, 2014).

In this thesis, a pragmatic epistemology was embraced to investigate the identification of alexithymia narratives aimed to reduce the likelihood of poor treatment outcomes. This pragmatic lens allowed for the use of quantitative data to gauge the prevalence and correlates of alexithymia, alongside qualitative data that illuminated the subjective experiences and psychosocial factors pertaining to those experiencing its symptomology. Such a blended approach is advocated by pragmatic epistemologists who assert the complementarity of multiple methods in yielding a more holistic and actionable understanding of complex social issues (Rorty, 1982; Morgan, 2014).

2.4 Rationale for a Clinical Population Sample.

In the realm of psychological research, the choice of participant sample is crucial for the validity and applicability of the findings. Utilising a UK clinical participant sample, sourced through partnerships with a local mental health charity and a rehabilitation centre, provides several unique advantages that are aligned with the objectives of the research (Smith et al., 2018). For example, these settings offer a more flexible approach compared to National Health Service (NHS) run facilities, often allowing for quicker recruitment processes and more personalised interactions with participants, which are essential for studies involving sensitive psychological assessments and interventions (Jones & Harris, 2020).

The involvement of clinical participants is particularly important in psychological research because it allows for the examination of therapeutic outcomes and psychological processes in real-world settings (Brown, 2017). Clinical populations provide a depth of insight into the efficacy of interventions that cannot be gleaned from non-clinical groups, thereby enhancing the external validity of the research (Brown, 2017). For instance, participants dealing with specific psychological challenges offer invaluable perspectives on the barriers to and facilitators of mental health recovery, which can lead to more effective clinical practices and policies (Taylor et al., 2019). Furthermore, the selection of charitable organisations over NHS-run services was a strategic decision motivated by several factors. Charities often have more flexibility in terms of operational policies and client engagement, which is particularly advantageous when implementing novel research methodologies or interventions that require adaptability (Williams & Patel, 2021). These organisations also frequently work with practice supervisors, included in the present research, who are not only highly experienced but also typically more available to oversee clinical research compared to their NHS counterparts, who may be constrained by heavier clinical loads (Adams, 2021).

By collaborating with a local mental health charity and a rehabilitation centre, this research not only leverages the specialised environments that these institutions provide but also enhances the practical relevance of its findings, contributing to improved mental health outcomes.

2.4 Patient and Public Involvement (PPI)

The incorporation of service user perspectives in the research process is anchored in three principal arguments, epistemological, moral, and consequentialist, all essential for the integrity and impact of the research. Firstly, the epistemological justification is grounded in the value of service users' unique insights and lived experiences. This aspect challenges the conventional positivist research methods, which can sometimes create a disconnection by treating participants merely as sources of data. Instead, participatory involvement ensures a closeness to the data, enhancing the authenticity and reducing potential misinterpretations (Greenhalgh et al., 2019; Richards & Schwartz, 2002).

Secondly, from a moral standpoint, there is an ethical imperative to involve those who contribute to and are potentially impacted by research. It is argued that the very individuals who stand to benefit or risk harm from research findings should have a voice in the process (Charlton, 2004; INVOLVE, 2012). This principle extends beyond mere involvement to empowering service users to have meaningful input in shaping research agendas (Arnstein, 1969). Thirdly, the consequentialist argument posits that service user involvement tends to enhance the relevance, quality, and applicability of research findings. Evidence suggests that when service users are actively engaged, the research questions become more aligned with their needs, thereby increasing the study's impact (Staley, 2009; Tritter & McCallum, 2006).

Moreover, service user involvement often results in improved recruitment and data quality, as they can provide insights that might otherwise be overlooked by academic researchers alone (Bishop & Shepherd, 2011; Shippee et al., 2015).

Despite the recognised benefits, integrating service user involvement in research, particularly in doctoral studies, faces practical challenges such as limited time and resources. There is also the risk of inadvertently restricting involvement to a non-diverse subset of service users, thus failing to capture the full spectrum of experiences and perspectives (Wallcraft & Amering, 2009; Wadman et al., 2019). In response to these considerations, this thesis actively sought the engagement of individuals with first hand mental health service experience. The aim was to bridge the epistemological gap between participant experience and researcher interpretation, uphold moral responsibilities, bolster research rigor and quality, and ensure that diverse voices were represented and heard throughout the study.

2.4.1 PPI Direct Involvement

The initial phase of the research involved discussions with therapeutic services surrounding the difficulties they face in treatment services for high-risk service users. This then led to discussions surrounding a clinician reported disconnect of emotions that appeared to be frequently observable in clinical populations. The term alexithymia was identified during these discussions which subsequently led to an extensive scoping review that aimed to synthesise existing studies on alexithymia, drawing from 152 clinical and 76 non-clinical studies. This form of patient and public involvement (PPI) proved useful for several reasons. First, it provided a landscape view of the methodologies previously utilised, allowing the identification of effective approaches and potential gaps in the literature. For instance, the

review highlighted that while many studies have focused on the prevalence of alexithymia in clinical populations, such as those suffering from PTSD or depression, many studies had looked at these components in isolation and not holistically. This disparity suggested an area for further investigation into how alexithymia interacts with a wide variety of personal narrative experiences.

Moreover, examining past studies enabled the primary researcher to gather insights on demographic variations, such as differences in the manifestation of alexithymia across genders or cultural groups. Which assisted in further discussions aimed at determining which demographic data was important to the data collection process and informed the type of settings required for data collection moving forward. For example, these findings prompted further discussions surrounding the suitability of community based, and residential clinical settings. By building on the findings, the scoping review assisted in tailoring the research questions and methods to address the overall aims of the research more effectively.

Informed by the scoping review, the follow-on study incorporated direct PPI by utilising focused discussions with staff from therapeutic services and service users, their input was included in the development of the questions aimed to explore personal narratives across both clinical and non-clinical cohorts. This approach was pivotal for several reasons. Firstly, personal narratives provide a rich depth that complements the existing findings. For example, many participants from the clinical group identified challenges in accessing traditional therapy, often struggling to build relationships with clinicians, a detail that might have been overlooked without the incorporation of this question informed by the scoping review findings.

Secondly, by getting input from both groups to develop the narrative questions, it enabled an exploration of potential differences and commonalities in how alexithymia affects individuals across different contexts. This comparison was vital for developing the clinical profiles that considered both the clinical severity of alexithymia and its everyday impacts on both clinical and non-clinical populations. Such findings echo the work of Taylor et al. (2019), who demonstrated that narrative methods could uncover unique emotional coping mechanisms that standard screening tools might not detect.

2.4.2 Collaboration and Input from Stakeholders

The study design and implementation were heavily influenced by collaborative inputs from various stakeholders, including therapists, CEOs of partnering organisations, and independent researchers. These collaborations ensured that the research methods were not only scientifically rigorous but also aligned with the practical and ethical standards expected by the communities involved. For instance, the feedback from organisational workers, who had observed previous research within the settings, was crucial in shaping the participant interaction strategies. They recommended building substantial rapport with participants before formal data collection, which led to the implementation of coffee mornings and informal chats, as suggested by partners at both organisations.

These pre-data collection interactions proved invaluable. They allowed the research team to address potential power imbalances and made participants feel more at ease, thereby facilitating more open and honest data sharing. This approach is supported by literature indicating that PPI enhances trust and validity in research settings (Simmons et al., 2020). However, despite the efforts to incorporate PPI throughout various stages of the research

process, additional areas of patient engagement may have been beneficial, but were not feasible given the time constraints.

2.4.3 Ethical Considerations and Building Rapport

The ethical considerations throughout the thesis were manifold and are discussed in further detail later in the thesis. However, to summarise, from the outset, participants were assured of their confidentiality, and informed consent was thoroughly discussed. This process was crucial, especially given the sensitive nature of the personal information involved. The ethical strategy included detailed consent forms, information sheets and discussions, that outlined the study's scope and participant rights, an approach that aligns with best practices in research ethics (Jones et al., 2017). Furthermore, the rapport-building phase that included group discussions in the final phase of data collection was not merely about gathering data but ensuring that participants felt respected and valued throughout the research process. This consideration is particularly important in psychological research, where the quality of data can be significantly influenced by the participant's comfort and trust level.

In summary, both indirect and direct PPI were instrumental in shaping the presented research. The scoping review provided a critical foundation by highlighting existing knowledge and gaps, while direct involvement with clinical and non-clinical participants enriched the data with personal insights, enhancing the study's depth and applicability. Finally, the collaborative efforts with stakeholders ensured that the study was conducted ethically and effectively, respecting both scientific and community standards.

2.5 Summary of External Clinical Expert Support

The presented research benefitted from external clinical expert support provided by CEO Dr. Noreen Oliver MBE and Kevin Langan, Director and head therapist at the Burton Addiction Centre. This support was pivotal in ensuring the research adhered to the highest ethical and practical standards.

The late Dr. Noreen Oliver MBE was a recognised figure in the field of addiction recovery and mental health. Her contributions to policy and her personal experiences with mental health challenges brought a unique and invaluable perspective to the supervisory process. Kevin Langan, as the head therapist at the Burton Addiction Centre a facility renowned for its comprehensive treatment programs and innovative approaches to addiction recovery, provided practical insights into the therapeutic aspects and variations of conducting research within clinical settings. Their roles included facilitating discussions about the research, reviewing risk assessments, and ensuring effective collaboration with partnering organisations. Their dual expertise in both policy influence and lived experience enriched the research, providing a bridge between academic research and practical, clinical applications (Lowe, Plummer, O'Brien, & Boydell, 2019).

External clinical expertise and oversight is crucial in clinical research involving sensitive populations, such as those with mental health issues. First, it ensures that the research methodologies are ethically sound, and that the welfare of participants is prioritised. Dr. Oliver and Mr. Langan's oversight ensured that the research protocols were rigorously evaluated against their organisational ethical standards, particularly concerning the vulnerability of the participant sample and their engagement in their residential rehabilitation programme, which are paramount in clinical settings (Dove, Gisondi, & Wayne, 2021).

Second, their involvement helped tailor the research approaches to better fit the clinical context. This alignment is essential for the applicability and relevance of research findings to real-world clinical settings. Their insights into governmental policy on mental health also ensured that the research could have broader implications for policymaking, potentially influencing future guidelines and interventions for alexithymia treatment (Smith & Stewart, 2017).

The benefits of such high-calibre external expertise include enhanced credibility and applicability of research findings. With their backgrounds, Dr. Oliver and Mr. Langan provided a comprehensive review of the research processes, adding a layer of validation that strengthens the study's findings within academic and clinical communities (Snyder, Caulfield, & Calder, 2020). Additionally, their lived experiences and professional expertise in mental health provided an empathetic approach to dealing with participants, ensuring that the research was conducted with sensitivity and understanding of the participants' conditions. This aspect is crucial in studies dealing with mental health, where understanding the participant's perspective can significantly influence the quality and accuracy of the data collected (Walker & Read, 2018).

The external expertise support by Dr. Noreen Oliver MBE and Kevin Langan was instrumental in guiding the research to meet ethical standards, enhance its clinical relevance, and ensure its integrity and applicability to both policy and practice. Their contributions underscore the importance of integrating expert oversight in research, particularly in fields involving vulnerable populations.

2.6 Study Designs Employed

Chapters 1, 2, 4 and 10 of the research presented are not empirical, and instead comprise an introduction, methodology, detailed description of Narrative Theory and a discussion.

Chapters 3, and 5 through to 9, comprise a body of empirical work conducted in line with the overarching thesis aims which included conducting a comprehensive review of the literature on alexithymia in conjunction with co-existing mental health conditions to holistically identify populations that are more susceptible to it. This was for the purpose of utilising the insights gained from the review to focus on a particular at-risk population sample, in order to enhance the detection and support of alexithymic individuals within clinical environments.

Consequently, these chapters employ various methodologies, spanning both quantitative and qualitative research methods, with several different analyses used. Each chapter is presented in a pre-determined order based on careful consideration of the gaps in research and the order in which these gaps were addressed. The first study of this thesis was a scoping review of alexithymia and its associations with co-morbid mental health. This study was included as the first study to gain holistic oversight of the existing literature pertaining to alexithymia and co-morbid mental health, but also to set the foundations for the follow-on research, ensuring it was governed by existing empirical findings.

2.6.1 Chapter 3 Scoping Review

2.6.1.1 Rationale for a Scoping Review

A scoping review is an invaluable methodology when the intent is to encapsulate a broad topic (Arksey & O'Malley, 2005). In contrast to systematic reviews, which target a highly specific question through stringent data synthesis (Munn et al., 2018), scoping reviews are

designed to explore the breadth of a complex topic. This expansive approach is particularly pertinent given the diverse implications of alexithymia that cut across disciplines such as medicine, psychology, and psychotherapy (Peters et al., 2015). Embarking on a scoping review to scrutinise the literature on alexithymia in the context of comorbid mental health concerns was therefore imperative for a multitude of reasons (see chapter 3).

The first was that it had been preliminarily identified that alexithymia is a multidimensional condition that as previously stated permeates across numerous disciplines. Alexithymia is a construct that has garnered attention from fields as varied as medicine, where it's linked to somatisation disorders (Taylor, et al., 1997), to counselling and psychotherapy, where it challenges traditional therapeutic engagement (Taylor et al., 1999). Consequently, its broad implications necessitated a research framework that transcends singular disciplinary perspectives (Levac, et al., 2010).

The second was that when formulating the research questions, it became apparent that different disciplines often place a diverse emphasis on methodological approaches. For example, within psychotherapy and counselling, case studies are often utilised and analysed more frequently than other disciplines, therefore, the use of a scoping review appeared to better incorporate a wider variety of papers from multiple disciplines. This provided less rigidity than other forms of follow up that typically arise from systematic reviews such as a meta-analysis.

The formulation of the research questions for this review was rooted in the SPIDER framework, which is adept for addressing mixed-methods inquiries (Cooke, et al., 2012). The SPIDER tool is a framework designed to enhance the development of research questions. It

represents an adaptation of the more familiar PICO framework, which stands for Population, Intervention, Comparator, and Outcome. In comparison, SPIDER stands for Sample, Phenomenon of Interest, Design, Evaluation, and Research type (Cooke, Smith, & Booth, 2012). Sample, refers to the specific group of people being studied and phenomenon of interest, is the condition or aspect of health being investigated. Design alludes to the type of study design being utilised, and the evaluation focuses on the outcomes. Finally, research type, indicates whether the focus is on qualitative, quantitative, or mixed methods research.

When applying the SPIDER framework to the research questions informing the scoping review, the sample included any studies highlighting alexithymia alongside comorbid mental health difficulties. The phenomenon of interest was attempting to identify the themes and associations between alexithymia and comorbid mental health concerns. The design of the scoping review ensured that the research could encompass a range of study designs, to capture detailed insights. The evaluation included the identification of the most prevalent themes, the nature of the associations, and the impact of these comorbidities on overall well-being. Finally, given the nature of the phenomena the research type, was qualitative to allow for a comprehensive exploration of the entire data set following conclusion of the scoping review.

The two research questions can be framed within the SPIDER tool as follows:

1. "What themes and associations can be found amongst those who experience alexithymia and co-morbid mental health difficulties?" In SPIDER terms, the Sample is individuals with alexithymia and mental health comorbidities, the Phenomenon of Interest is the themes and associations in this group, the Design was exploratory, the Evaluation looks at the

identification of these themes and associations, and the Research Type would be qualitative as the themes were thematically identified.

2. "What treatment options have been explored for alexithymia and co-morbid mental health difficulties?" Here, the Sample remains the same; the Phenomenon of Interest is the treatment options; the design was exploratory; the evaluation was the effectiveness or outcomes of these treatments; and the Research Type was again qualitative as the themes were thematically identified.

By using the SPIDER tool, the researcher ensured that the research questions were broad enough to capture the complexities and subtleties of alexithymia in the context of mental health conditions, which often require more flexible approaches to fully understand (Cooke et al., 2012). By employing this framework, the scoping review sought to distil the prevalent themes, associations, and treatment avenues within the realm of alexithymia and concurrent mental health ailments. Furthermore, delving into the treatment options for alexithymia in such populations uncovered the therapeutic approaches across varying disciplines, highlighting interventional disparities and avenues for standardised care (Luminet, Bagby, & Taylor, 2018).

Consequently, the scoping review approach was paramount for the topic area that was characterised by its complexity and diverse methodological perspectives. It allowed for an inclusive overview of the existing literature, accommodating studies that span from empirical research to clinical applications, thus ensuring that all pertinent information was captured (Tricco et al., 2018).

2.6.1.2 Summary of Methodology

The scoping review adhered to the framework developed by Arksey and O'Malley (2005), updated by the JBI guidelines (Peters et al., 2020). The preliminary stage, previously discussed, included the identification of the research questions. This was following an initial literature exploration. The research questions were then formulated to focus on alexithymia in the context of comorbid mental health conditions across all ages, cultures and disciplines.

A comprehensive search of databases then commenced including PubMed, Scopus, Cochrane Library, PsychInfo, and Medline. Manual searches of reference lists of included studies were also conducted. Grey literature was excluded to maintain quality and relevancy. The studies considered were all peer-reviewed, published from 1990 onward, in English, involving children to adults, and specifically focused on alexithymia's relationship to comorbid mental health conditions. The next step included study selection using selected search terms, a large number of articles were identified and subsequently screened for relevance using titles and abstracts. This was done according to PRISMA guidelines, and a flowchart was used, documenting exclusions noted for articles that did not meet the criteria or were inaccessible. Articles were then thematically categorised into broad themes like "trauma and alexithymia" or "depression and alexithymia" during this stage. Whereas stage 4 incorporated charting the data that saw the development of a data extraction table to capture important details from each study, such as themes, authors, publication date, title, participant details, findings, methodology, and any issues or problems noted within the study. The charting process was iterative, with regular discussions among the research team to ensure consistency and thoroughness in the review. Finally, the last stage consisted of combining themes together thematically, collating, summarising, and reporting the results. The data was then summarised addressing the research questions.

The scoping review's design reflected a thorough and methodologically sound approach, which was essential for identifying gaps in the literature and guided future research directions. By following this design, the review provided a comprehensive overview of alexithymia and its treatment options within the context of comorbid mental health conditions.

2.6.2 Chapters 4 & 5 Narrative Theory

2.6.2.1 Rationale for the use of Narrative Theory

Narrative theory in clinical research, particularly in the context of conditions like alexithymia, provides a powerful framework for understanding the complex interplay between individual experiences and mental health outcomes. The scoping review highlighted the inconsistencies in research findings regarding the relationship between mental health and alexithymia, underscoring the need for a methodological approach capable of capturing the diverse experiences of individuals affected by it. The narrative theory approach addresses this by focusing on the stories that individuals construct and share about their lives, which can offer deeper insights into how they perceive and cope with their experiences and its impact on their emotional processing capabilities.

The rationale for employing narrative theory in chapters 4 and 5, is rooted in its ability to provide a more individualised understanding of how individuals make sense of their experiences, and the relationship that this has with alexithymia symptomology. Narrative theory allows researchers to explore how personal stories and experiences contribute to emotional awareness and processing disorders. This approach is particularly valuable because

it recognises the subjective nature of experiences such as trauma and the variability in how individuals respond to it (Adler, 2012). By examining these personal narratives, researchers can identify patterns of meaning that individuals attribute to their experiences, which are often lost in more quantitative research methodologies.

Moreover, narrative methods can help uncover why certain individuals may develop symptoms of alexithymia following trauma while others do not. These narratives provide insights into personal resilience and vulnerability, which are critical in understanding mental health (Neimeyer, & Levitt, 2001). For instance, the ways individuals narrate their trauma experiences can reveal how they have integrated these experiences into their self-concept and how this integration, or lack thereof, relates to resilience, treatment engagement and emotional processing.

Incorporating narrative theory into clinical research thus allows for a richer understanding of the psychological impacts of co-morbid mental health concerns such as trauma, depression, anxiety and other mental health complaints. It offers a framework for exploring the diversity of human experiences in a way that respects the complexity of individual life stories and the meanings they carry, which are often pivotal in the presence, onset, or absence of psychopathological symptoms such as alexithymia.

2.6.2.2 Summary of Methodology

To identify the principles of narrative theory, a narrative review was conducted (see Chapter 4). A narrative review, also known as an integrative review, provides an overview of a topic without the stringent methodological framework typically seen in systematic reviews. It synthesises existing literature based on the subjective interpretation and critical analysis by

the reviewer, often encompassing a broad spectrum of content, including theoretical articles, empirical studies, and case reports.

The process of conducting a narrative review involves; identifying a topic which is often broad to capture various aspects of a subject. A literature search, that unlike systematic reviews, the search might not follow a strict protocol, and the inclusion criteria can be flexible. Data extraction incorporation a summary and synthesis of the findings from the literature based on issues deemed important by the reviewer. Finally, an analysis and synthesis, that discusses the implications of findings, providing a comprehensive understanding of the topic.

A narrative review is particularly useful when the topic is vast, complex, or not yet well-defined. Additionally, it can be used to provide insights into a new or emerging area of research. However, it can be most useful when providing a conceptual framework or structure that underpins a field of research to inform future processes. The latter of which was the justification for conducting a narrative review surrounding the benefits of narrative theory.

Given the complexity and depth of individual experiences in the context of alexithymia, a narrative review was chosen to understand the potential of adopting the principles of narrative theory in the topic area. From the scoping review, it was evident that alexithymia, as a field, demands consideration of individual differences that quantitative and qualitative studies often overlook.

Qualitative research, while deeply exploratory, may still rest on generalisations from small, non-representative samples. Conversely, quantitative studies, despite their larger sample

sizes, often fail to capture the depth and nuances of personal experiences and individual narratives (Polkinghorne, 2007). These methodological limitations underscored the need for a narrative review, which holistically integrated insights from both research paradigms.

Employing a narrative review allowed the researchers to retain the core findings and theoretical insights from the initial scoping review, ensuring they permeate through subsequent phases of the research. This approach not only preserves the 'gold thread' of individual narratives, but also encouraged innovative research methodologies that were more adaptive to the diversity of human experiences (McAdams, 2008).

Thus, the narrative review in the context of narrative theory for alexithymia served to maintain a focus on individual stories and experiences, that are crucial for understanding and treating this complex condition. It provided a structured yet flexible framework that accommodated the diverse aspects of human experiences, ensuring that the foundational elements of the scoping review were not lost through more rigid research methodologies later on in the research process.

2.6.3 Smallest Space Analysis

2.6.3.1 Rationale for the Smallest Space Analysis

Smallest Space Analysis (SSA) is a statistical technique used in psychological research to explore complex patterns of relationships among variables within a multidimensional space. The use of SSA is particularly advantageous in fields where the complexity and number of variables can be overwhelming, as often found in narrative-based research. This technique

aligns well with the principles of narrative theory, offering a structured yet flexible approach to analysing intricate datasets.

Smallest Space Analysis is particularly adept at handling complex data sets, and as the scoping review highlighted a vast array of variables influencing individual narratives, which posed challenges for traditional quantitative and qualitative methodologies. The use of an SSA was considered to address this challenge. This was because SSA allows researchers to analyse an infinite number of variables, facilitating a more comprehensive exploration of data without losing the richness of individual narratives (Guttman, 1968). Additionally, SSA facilitates the mapping of relationships enabling researchers to visually represent and examine different variables within a single space. This capability is crucial when dealing with narrative data, which often involves interlinked aspects that traditional analytic methods might oversimplify or overlook. One of the significant challenges in narrative research is balancing the individual-specific nature of narratives with the need for generalisable findings. However, SSA helps bridge this gap by identifying common patterns and themes that transcend individual stories, thus offering insights that are both personally relevant and broadly applicable (Levitt, 2015).

Research surrounding this methodology revealed that SSA has been successfully employed in various psychological studies to explore complex phenomena such as personality traits, coping strategies, and interpersonal relationships (Canter, 2000; Ioannou & Oostinga, 2016; Canter & Youngs, 2009). For instance, studies on crisis intervention have used SSA to map out the various factors and their interconnections, guiding more effective therapeutic support (Canter, 2000).

Consequently, the SSA's ability to consider an extensive range of variables and maintain the integrity of individual narratives aligns with the foundational principles of narrative theory emphasising the significance of personal stories and experiences in understanding human behaviour, yet it complements this by providing a methodological framework that respects and preserves these narratives whilst also exploring broader patterns (McAdams, 2013).

2.6.3.2 Summary of methodology

The methodology for this element of the research revolves around a mixed-methods approach, combining narrative elements with structured quantitative analysis. The aim was to bridge the gap in literature regarding alexithymia, with a focus on the varied narratives surrounding individual life experiences.

The study collected data from two distinct populations in the UK: a non-clinical group of 82 adults and a clinical group of 80 adults. The methodology involved a narrative questionnaire informed by the scoping review. The questionnaire included 98 binary (yes/no) questions across seven thematic areas. The Perth Alexithymia Questionnaire (PAQ) (Preece et al., 2018), was also employed. Data collection utilised a combination of online survey distribution and paper copies for the clinical sample, ensuring inclusivity in participation.

The Smallest Space Analysis (SSA) used within SPSS was the primary analytical tool used. It provided a visual association matrix that captured the complexity of the data. The SSA was coupled with Facet Theory to systematically explore variables within the same region of the visual plot. This facilitated the identification of potential protective and risk factors in the development of alexithymia.

This approach proved innovative in that it integrated the individual narrative into a structured analysis, addressing one of the main challenges in research on psychological constructs influenced by diverse life experiences.

2.6.4 Chapter 6 Exploratory Factor Analysis and Binary Logistic Regressions

2.6.4.1 Rationale for the use of Exploratory Factor Analysis and Binary Logistic Regressions

The rationale for utilising Binary Logistic Regression and Exploratory Factor Analysis (EFA) following the Smallest Space Analysis (SSA) in Chapter 6, was rooted in the multi-faceted nature of psychological research.

Binary Logistic Regression is employed as a confirmatory tool to ascertain the likelihood of occurrence of a particular outcome, in this case, the risk factors contributing to alexithymia. By applying this method, the researcher could predict the presence or absence of alexithymia based on a range of independent variables, which included the various narratives and individual experiences were highlighted in the SSA. This technique aligns with the “mixed methods” movement, combining the rich, qualitative insights into individual narratives with a quantitative approach that allows for generalisation (Powell et al., 2008; Venkatesh et al., 2013). Binary logistic regression thus served to validate the patterns found in SSA and helped to translate complex, narrative data into actionable statistical insights that informed the following studies. Whereas an exploratory factor analysis (EFA) is implemented to understand the underlying structures among variables and to identify potential factors that represent these variables. It is particularly useful when developing new psychological tools,

such as screening instruments, which require a basis in both individual experiences and broader patterns that apply across populations (Powell et al., 2008; Venkatesh et al., 2013). EFA is key in ensuring that screening tools do not overlook the narrative richness of individual experiences (Barak & English, 2002; Turner & Lloyd, 1995).

In this research, the EFA was instrumental in translating the narrative complexities uncovered by SSA into factors that could be generalised across the population while preserving the integrity of individual stories. The study intended to use this data to further quantify the findings from the narrative driven SSA and to confirm its applicability guiding the creation of a new screening tool.

By using EFA, the researcher was able to develop a screening tool that incorporates narrative elements through the support of the quantitative data, providing a more holistic understanding of individuals at risk for alexithymia. This approach is not only innovative but also more reflective of the complexities in psychological research, where subjective experiences can have significant impacts on mental health outcomes (Kroenke, 2023; Hogan and Goldman, 2021). Binary logistic regression and EFA was thought to offer the means to fine-tune the interpretation of the SSA results, affirming the "mixed methods" movement's stance on the value of integrating qualitative and quantitative methodologies in psychological research (Foster, 2023; Kirkman, 2002).

2.6.4.2 Summary of the Methodology

The section of the research provided a continuation of study 3 utilising the pre-existing data to deepen the understanding of alexithymia's aetiology and its associations with various life experiences. Data from the 162 participants was reused and the study conducted ten separate

binomial logistic regressions using SPSS, examining how different life experiences might predict components of alexithymia, as measured by the Perth Alexithymia Questionnaire (PAQ). Only "high" scores on the PAQ's alexithymia components were included, focusing the analysis on variables likely indicative of significant alexithymic traits. The deliberate exclusion of "low" and "average" scores was to prevent overrepresentation of the influence of life experiences on alexithymia, although it was noted this may lead to conservative estimates.

Following regression analyses, EFA was employed to refine the set of variables significantly associated with alexithymia. This step aimed to distil the data into a manageable number of factors for the development of a new, more streamlined screening tool. The EFA's purpose was to ensure the new tool was informed by a robust empirical foundation, reducing the set of variables to those most meaningful in relation to alexithymia, thus enhancing its utility and applicability in clinical settings. This methodological approach underscored a commitment to rigorous research standards while acknowledging the balance between the depth of individual experiences and the necessity of their broader applicability in psychological assessments and interventions.

2.6.5 Chapter 7 Inter-Rater Reliability in Screening Tool Development

2.6.5.1 The Importance of Inter-Rater Reliability

Inter-rater reliability and descriptive statistics play critical roles in enhancing the validity and interpretation of research findings, especially when using screening tools.

Interrater reliability ensures the consistency of the results generated by different assessors. It is crucial in research contexts involving qualitative measures or the application of screening tools that require subjective judgment. When different clinicians or researchers independently concur in their assessments, it underpins the objectivity of the screening tool and validates the conclusions drawn from the data. This reliability is a measure of the screening tool's dependability, indicating that it provides stable and consistent outcomes irrespective of the evaluator.

The advantages of robust interrater reliability include confirming that the tool yields uniform results across different raters, which is vital for the credibility of the research. Consistent findings across various raters suggest that the tool effectively measures the intended phenomena, reinforcing its validity. High interrater reliability implies that the screening tool's results can be extrapolated to broader contexts, indicating its potential for widespread application across various demographics and settings. Finally, it minimises the influence of individual rater biases, as the agreement between different raters points to an objective assessment rather than one coloured by personal viewpoints.

Descriptive statistics complement interrater reliability by providing a detailed analysis of the data. These statistics summarise the data in a meaningful way, allowing researchers to describe the basic features of the results and obtain a clear overview of the findings. They can be instrumental in understanding the general trends and patterns within the data.

Consequently, employing both interrater reliability and descriptive statistics ensured a comprehensive and trustworthy analysis when evaluating the efficacy of the screening tool. This approach bolstered confidence in the tool's utility and its suitability for practical application in clinical or research settings.

2.6.5.2 Summary of the Methodology

Chapter 7 employed a methodical approach to investigating alexithymia in a residential rehabilitation setting. The study featured twenty UK residents from a government-funded rehabilitation centre, ages 20 to 62. Five therapists also participated, but their demographic data was not collected. The participant group was chosen to be representative of individuals likely to exhibit alexithymia alongside mental health concerns. Participants were recruited through opportunity sampling, ensuring voluntary participation without inducements.

After being informed about the study and expressing interest, residents underwent screening with the PAQ Short Form, designed to identify potential alexithymic traits. Those with indicative scores received further assessment with the screening tool developed from the previous research and contained three significant narratives associated with alexithymia. Participants' responses to these narrative-driven questions were quantified, categorised, and validated through participant and therapist agreement.

The findings from the narrative assessment were offered to be incorporated into the participant's care plan, with the intent to personalise and potentially enhance the treatment approach. This step was conducted with participant consent and involved the therapists' input. Upon completion, participants and therapists received both a debrief form and a verbal debriefing session. This process served to clarify the study outcomes and address any questions or concerns arising from the research participation.

The methodology underscored the study's aim to evaluate alexithymia in a clinical setting effectively, ensuring participant safety and consent, and leveraging the expertise of qualified

therapists to interpret the screening tool's results. The study's design demonstrated a conscientious balance between rigorous research standards and ethical responsibility toward vulnerable populations.

2.6.6 Chapter 8 Qualitative interviews and Reflexive Thematic Analysis

2.6.6.1 Rationale for using qualitative interview and thematic analysis

The selection of qualitative interviews, specifically the semi-structured format, was driven by the nature of the research question, which sought to delve deeply into personal experiences and perceptions surrounding therapeutic practices. Semi-structured interviews offer a balanced framework where the researcher has the flexibility to probe deeper into topics of significance that emerge during the dialogue, while still guided by a predefined set of open-ended questions (Adams, 2015). This approach is particularly advantageous in settings where the information discussed may be of a sensitive nature, as it respects participant confidentiality and accommodates the unique contexts of each individual's experiences (Adams, 2015).

For the resident participants, the private and potentially sensitive nature of information discussed with their therapists necessitated an individual approach to maintain confidentiality. Similarly, for therapist participants, logistical challenges such as conflicting schedules made individual interviews more feasible than coordinating focus groups. Additionally, the individual interview format aligns well with exploring nuanced understandings and experiences directly tied to the stakeholders' involvement, making it an ideal method for gathering rich, detailed data.

RTA (Braun & Clarke, 2022) was employed as the analytical strategy due to its versatility and robustness in identifying and interpreting patterns across data. This method is conducive to both novice and experienced researchers and supports a flexible, yet rigorous examination of qualitative data (Byrne, 2022). By coding the data inductively, the analysis remains grounded in the actual data, allowing themes to be constructed without the constraint of pre-existing theoretical frameworks (Byrne, 2022). This approach is particularly suited to studies like the present one, where the goal is to uncover new insights about phenomena such as alexithymia and its interaction with co-morbid mental health issues in therapeutic settings.

2.6.6.2 Summary of Methodology

The final study chapter (8) employed individual semi-structured interviews to collect data from both resident and therapist participants. This method was chosen to ensure privacy and to accommodate the varying availability of therapists. The semi-structured nature of the interviews allowed for an open-ended exploration of topics, while still providing sufficient structure to address the research questions effectively.

Thematic analysis, as outlined by Braun & Clarke, was utilised to analyse the interview data. This approach facilitated a systematic examination of the data to identify key themes and patterns. The analysis was conducted inductively, meaning that themes were derived directly from the data rather than being imposed based on prior theoretical expectations. This was crucial for authentically capturing the participants' experiences and insights related to the use of the screening tool in a therapeutic context. However, while the data was analysed inductively, the thematic analysis also moved beyond superficial descriptions to explore deeper, interpretative levels of data. This involved examining the underlying ideas, assumptions, and ideologies that inform the experiences of therapists working with clients

who have alexithymia. By analysing the themes at the latent level initially, it facilitated an interpretation to be applied after alongside previous literature, therefore providing a comprehensive understanding of the challenges and dynamics within therapeutic environments, for example, the impact of prevalent “revolving door” ideologies in such settings.

2.7 Study Settings

The research was carried out in two distinct settings to accommodate both non-clinical and clinical populations, utilising remote data collection methods for the former and direct recruitment for the latter.

2.7.1 Qualtrics for Remote Data Collection

Qualtrics is an online survey platform that allows researchers to create, distribute, and analyse surveys for various purposes, including academic research. Developed in 2002 by Ryan Smith, Jared Smith, and Stuart Orgill at Brigham Young University, the platform has evolved into a comprehensive suite for managing and evaluating human experiences.

Qualtrics provides robust tools to ensure the security and confidentiality of research data, adhering to data protection standards like GDPR and providing features such as anonymous responses and secure data storage. The platform's flexibility and user-friendly interface make it ideal for remote data collection. The links to Qualtrics was shared across social media platforms like Facebook and Instagram for the purpose of recruiting the non-clinical participant sample.

2.7.2 Stoke Community Drug and Alcohol Service

The Stoke Community Drug and Alcohol Service is a local support initiative aimed at providing assistance to individuals struggling with substance abuse. The service has established partnerships with the NHS, Stoke on Trent local authority, and various charitable organisations. The service itself incorporates more than support for those struggling with addiction, they have numerous elements to the service that provides psychological support for mental health and well-being, rehabilitation for offenders, and a homelessness programme. The services on offer include counselling, therapy, psycho-social support, access to work and medical treatment, focusing on holistic recovery and community reintegration. Due to their established partnerships, they actively engage in service development and have an active interest in relevant research. The benefits of utilising this service for the purpose of the current research include multi agency oversight, continuity of care to participants and the availability of participants who were likely at higher risk of alexithymic tendencies based on prior research.

2.7.3 Burton Addiction Centre

The Burton Addiction Centre is a facility that specialises in treating addiction. It provides tailored support to individuals, including detoxification programs, psychological therapies, and support groups. The centre was established in 1998 produces some of the highest long term outcomes in the country, with a capacity to support 36 residential places, the specific programs offers group therapy, one-to-one therapy, specialist therapy based on individual needs, past and present issues include Post Traumatic Stress Disorder, domestic abuse and child trauma, support groups including AA/NA with in-house and community meetings, workshops including anger management, health education, stress management, cycle of

addiction, relapse prevention, holistic therapy including acupuncture, reiki healing and mindfulness, art therapy, psychodrama, health and nutrition awareness and skills, leisure activities including yoga and creative arts, two year aftercare programme with access to therapy team and group therapy and family therapy

Chapter 3. Exploring Alexithymia within co-morbid mental health populations: A scoping review

3.1 Chapter Overview

This chapter presents a scoping review aimed at exploring the complex and multidisciplinary nature of alexithymia. The chapter details the systematic process of article selection, screening for relevance, and thematic categorisation. This methodical approach facilitated the development of a data extraction table to chart and discuss significant findings comprehensively. The final stages of the review focused on thematically synthesising the data to highlight prevalent themes, associations, and potential treatment options for alexithymia, providing a holistic view of the condition within mental health populations. The results culminated in identifying gaps in the literature and setting directions for future research within the thesis.

3.2 Introduction

Research into alexithymia began in the 1970s, and the initial studies faced criticism due to hastily developed assessment tools that lacked consistency and accuracy (Bagby & Taylor, 1997). Nevertheless, in the following three decades, studies have increasingly substantiated alexithymia's validity, with new, more reliable, and valid tools for evaluation being introduced (Lane et al, 1996; Bagby et al., 1994; Vorst & Bermond, 2001). Consequently, a growing body of research has recognised alexithymia in populations vulnerable to mental health issues, including those with substance abuse, PTSD, and eating disorders (Barahmand et al., 2016; Brady et al, 2017; Berger et al., 2014). The connection between alexithymia and

concurrent mental health disorders, however, remains under-researched, with symptom overlap hindering effective treatment approaches (Fenwick & Sullivan, 2011; Hintikka et al., 2004; Louth et al., 1998). Further investigation into this relationship has the potential to influence a wide range of research fields, including criminal behaviour, childhood development, addiction, and trauma-focused therapy (Louth et al., 1998; Barahmand et al., 2016; Brady et al, 2017; Saunders, 1988), despite emerging limitations in current findings.

For instance, the challenges that a person with alexithymia faces with emotion recognition and expression, may compromise the efficacy of self-report tools commonly used in research (Aleman, 2007). In complex populations, such as those with both alexithymia and additional mental health issues, there is a risk of underrepresentation in research contributions. Take, for example, substance abuse groups, where engagement in research can be difficult if participants are influenced by substances during studies (Cicero & Holmstrom, 1998). Despite the scarce treatment literature, some small-scale studies suggest benefits from mindfulness, group therapy, and oxytocin-induced emotional responses (MacMurray & Bozzetti, 1987).

An impartial exploration of alexithymia alongside mental health conditions could reveal patterns within the existing literature, aiding in the identification of areas for further research and more efficient treatment pathways. The initial scoping of the literature indicates that while alexithymia has a solid foundation in psychological research with trusted and verified assessment methods, its impact on vulnerable populations deserves further objective examination. The field could also gain from innovative approaches to screening and assessment. Therefore, a scoping review was carried out to detect underlying themes and to pinpoint potential treatment directions. This review approach was chosen over a systematic review to capture all relevant studies on alexithymia across diverse research fields. A broad

research question was posed along with a limited exclusion criterion. The goal of this review was to scrutinise the peer-reviewed literature to uncover gaps that could direct future research and inform clinical practice.

3.2.1 Objectives

The objective of the scoping review was to systematically scope the extent of published peer reviewed studies to examine the nature, range and extent of empirical research investigating alexithymia and co-morbid mental health conditions. Additionally, the authors sought to gain insight into the number of treatment options currently available to “at risk” populations and identify gaps within the literature. Finally, the scoping review aimed to provide a critical overview of current empirical literature to aid identification of future research trends in alexithymia and co-morbid mental health conditions.

3.3 Methods

The review conducted adhered to the scoping review framework developed by Arksey and O’Malley (2005) and the updated JBI guidelines (Peters et al., 2020). This consisted of Stage 1 - identifying the research question; Stage 2 - identifying relevant studies; Stage 3 - study selection; Stage 4 - charting the data; and Stage 5 - collating, summarising, and reporting the results.

3.3.1 Stage 1: Identification of the research questions

Prior to identifying the research question, an exploration of the literature surrounding alexithymia assisted to refine the protocol. The findings indicated that alexithymia has been

found in both children and adults who appear to present in one of two categories, alexithymia associated with co-morbid mental health, or alexithymia present alongside chronic pain such as that associated with cancer. The review indicated that within the chronic pain cohort, alexithymic symptoms could be explained more effectively by health anxiety, health related depression, and hospital trauma. Consequently, such findings indicate that it may be difficult to isolate alexithymia from the numerous variables within this cohort for an objective review. In comparison, whilst many variables had been considered within the alexithymia and mental health cohort, many of the findings reported the existence of alexithymia even when such variables were controlled. Consequently, the research questions were developed with a view to narrow the research population to those who experience co-morbid mental health conditions but to keep the age range broad to include both adult and child populations. The main research questions were developed by the primary author in collaboration with the co-authors. The research questions included:

1. What themes and associations can be found amongst those who experience alexithymia, and co-morbid mental health difficulties?
2. What treatment options have been explored for alexithymia and co-morbid mental health difficulties?
3. What gaps in the literature can be identified from this review?

3.3.2 Stage 2: Identification of the relevant studies

The identification of studies relevant to the present review were achieved by searching electronic databases of published peer reviewed literature which included PubMed, Scopus, Cochrane Library, Psych Info and Medline. All reference lists of included studies were searched manually to identify any additional studies that may be relevant for the review. Grey

literature was excluded due to challenges in assessing quality among the vast spectrum of grey literature that may be included in scoping reviews. Furthermore, it was anticipated that the lack of formal quality assessment typical of grey literature may impact the uptake and relevance of the findings of the proposed scoping review (Benzies et al., 2006). Based on the initial exploratory findings, it was agreed that the following eligibility criteria would be applied.

1. **Type of publication:** Peer-reviewed empirical studies of any design were considered for this scoping review, where the study objective was defining or measuring subjective or objective alexithymia alongside its relationship to co-morbid mental health conditions.
2. **Time frame:** Due to the previously discussed issues identified surrounding the reliability and validity of studies prior to 1990 it was agreed that only literature from 1990 to 2022.
3. **Study population:** Children, adolescents, and adults from any country or ethnic background.
4. **Language:** English
5. **Types of review articles:** Any type of empirical study which include combinations of the initial search terms within the title and/or abstract, systematic reviews, meta-analysis, scoping reviews, literature reviews, narrative reviews, critical reviews, and all must be full text articles available electronically.

Following an initial scope of the literature it was determined that the exclusion criteria would include the following.

1. Literature that focused broadly on alexithymia and did not address its relationship to co-morbid mental health conditions.
2. Any studies/articles which failed to isolate alexithymia amongst other variables being studied.
3. Studies that cannot be accessed or the full text retrieved.
4. Studies that cannot be accessed in the English language.
5. Literature prior to 1990.
6. Any articles that include a chronic pain variable.

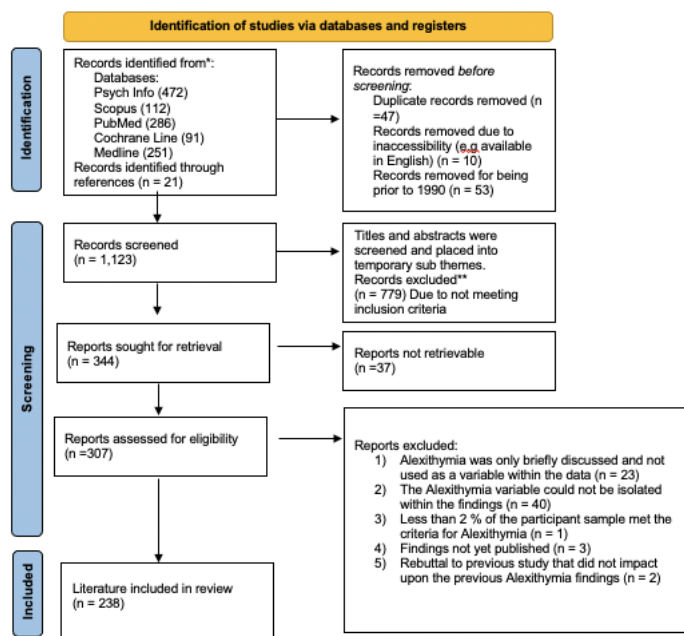
Levac et al. (2010) suggested that an iterative process should be utilised to identify key search terms. The following key terms were used, alexithymia, alexithymic, emotional clarity, mental health, mental wellbeing and somatisation. Articles were retrieved from each database and imported into the reference management software Zotero. To maximise the amount of relevant literature, truncation (*) and Boolean operators 'AND/OR' were applied when searching the databases.

3.3.3 Stage 3: Study Selection

The third stage of the framework aimed to identify the studies which will be included in the scoping review. Utilising the key search terms, 1,233 articles were identified. The results from the database searches were combined using Zotero reference management software and duplications were removed. The process of article selection followed the Preferred Reporting of Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement (Liberati et al. 2009). Initially, Titles and Abstracts were reviewed, and broad themes were generated, placing articles within similar topic areas such as “trauma and alexithymia” or “depression and alexithymia”. This allowed for a methodological approach to the process, enabling a

review of the broad themes once full texts articles had been considered. During this stage, the titles and abstracts were also considered in line with the exclusion and inclusion criteria. Articles removed were selected at random for further checks by another member of the research team and reports seeking retrieval were identified. All those randomly selected were agreed and the number of reports unretrievable were noted within a PRISMA flowchart in line with PRISMA guidelines.

Figure 3.1 PRISMA FLOW CHART



3.3.4 Stage 4: Charting the data

Having completed the pre-liminary scoping stage, a data extraction table was developed to include categories that enabled a thorough understanding of the literature characteristics and to assess the literature for further inclusion or exclusion based on the eligibility criteria.

The categories were as follows.

1. The broad theme the literature appears to sit within.
2. The Author and date
3. Article Title
4. Addressed issues and number of participants.
5. Findings
6. Methodology. e.g., Quantitative/ Qualitative
7. Research method utilised e.g., Correlational/regression/ ANOVA
8. Problem Statement e.g., any issues arising within the data or methodology used.
9. Inclusion or Exclusion statement.

Any questions arising from the chartered data were discussed with the research team to ensure that the framework being utilised was consistent and contained the relevant characteristics needed to fully ascertain the breadth and depth of the data. The primary researcher discussed articles charted at agreed intervals with the team. Furthermore, to ensure that articles were being independently reviewed, 35 percent of articles were selected for a second review by another member of the research team. Any discrepancies found within the extracted data were then discussed with the full research team until a consensus was reached.

3.3.5 Stage 5 collating, summarising, and reporting the results

Once the charted data was agreed this was reviewed by the primary researcher and summary characteristics were summarised from the findings. In line with research questions (1) what themes and associations can be found amongst those who experience alexithymia and co-

morbid mental health difficulties, and (2) what treatment options have been explored for alexithymia and co-morbid mental health difficulties, the findings were summarised based on the themes and associations found within the data set, and the treatment options currently available. The results of research questions (1) and (2) then combined to enable effective insight into the gaps within the literature subsequently providing a summary for research question (3).

3.4 Results

The Scoping review included a total of 238 articles with 86 originating from North America, 81 from Europe, 21 from Asia, 19 from the Middle East, 17 from Australasia, 13 from Scandinavia and one from South America. The type of analysis used consisted of 227 studies quantitatively analysed, with eight utilising a qualitative approach and three using mixed methods. A total of six literature reviews, four systematic reviews, 33 experimental studies and 195 correlation studies were reviewed as part of the scoping review process.

Participant characteristics mostly included an adult population sample with 203 studies assessing alexithymia in those 18 and above in comparison to 25 studies that incorporated a juvenile sample. A clinical sample was used more often within the studies reviewed and this included 152 using a clinical population in comparison to 76 utilising non-clinical population samples. The screening tools used to evaluate alexithymia were heavily weighted towards the Toronto Alexithymia rating scale (TAS-20) with a total of 180 studies incorporating it. The Alexithymia Questionnaire for Children (AQC) was utilised within six studies, the Bermond-Vost Alexithymia questionnaire (BVAQ) used in four, the Observer Alexithymia Scale (OAS) used in three, Emotional Recognition test (Emobio) used in two, Perth Alexithymia

Questionnaire (PAQ) used in two, the Toronto Alexithymia scale short form (TAS-9-C) used in 1 and the Emotional Quotient Inventory (EQ-I) was also only utilised in one study.

Altogether 6 themes were found throughout the data these included PTSD, Trauma and Stress which incorporated 53 articles, Addiction incorporating 41, Offending, Violent and anti-social behaviour incorporating 41, Depression Self harm and suicidality incorporating 28, Treatment options incorporating 24, Psychiatric, Eating and Sleep disorders incorporating 38 and parenting incorporating 13.

3.4.1 Addiction

Despite the apparent difficulties associated with correlational research, there appears to be overwhelming evidence that alexithymia is heavily associated with addiction (Aleman, 2007; Kohamia & Sheibani, 2020; Bruce et al., 2012; Cleland et al., 2005; Coriale et al., 2012; Craparo, 2011; de Haan et al., 2012; De Rick & Vanheule, 2007; de Timary et al., 2008; Evren & Evren, 2005; Hawkins et al., 2021; Kopera et al., 2020; Lyvers et al., 2012; Obeid et al., 2020; Oyefeso et al., 2008; Schimmenti et al., 2017; Staskiewicz et al., 2012; Thorberg et al., 2011; Thorberg et al., 2016; Uzun, 2003; Vilhen-Churchill & Goldstein, 2014; Yates et al., 2012; Yousefi et al., 2019; Youssef et al., 2020). The scoping review revealed that elevated levels of alexithymia have been found amongst alcohol, opiate, non-opiate, and gambling populations (Cicero & Holmstron, 1998; Barahmand et al., 2016; Bibby, 2016, Dorard et al., 2008). Furthermore, such findings do not appear to be replicated amongst non-clinical cohorts, suggesting that those with alexithymia may be predisposed to addictive behaviours (Hamidi et al., 2010; Ghalehban & Besharat, 2011). Consequently, many studies have attempted to explore how alexithymia contributes to addictive pathology with a review of the literature indicating that individuals with alexithymia engage in addictive activities to

inflate positive affect, cope with negative affect, increase arousal, and assist them in socializing with others (Hamidi et al., 2010). This seems plausible given that affect intolerance, dysphoria, and interpersonal difficulties form an increasingly recognised pathway to addiction (Le Berre, 2019). However, alexithymia also reduces the likelihood of positive engagements with treatment services (Loas et al., 1997). Utilising the TAS-20, findings have revealed that difficulties identifying feelings and difficulties describing feelings contributes towards fractured relationships with key workers and therapists in treatment services (Saladin et al., 2012). Given the nature of therapeutic interventions often requires a person to reflect upon their feelings and emotions, such findings are not surprising, but are concerning given that this renders treatment services inaccessible to those with alexithymia.

Despite this, it is difficult to comprehend the reliability of the findings within substance misuse cohorts, as multiple studies have questioned the suitability of the TAS-20 (Mitrovich & Brown, 2009; Dorard et al., 2008; Thorberg et al., 2009; Thorberg et al., 2010). It has been suggested that whilst the TAS-20 shows both factorial validity and reliability, some items within the scale have non-trivial loadings. Furthermore, some items were weakly loaded, particularly within the external thinking factor, with further items identified as weakly influenced by the factors they were expected to measure (Thorberg et al., 2010; Preece et al., 2020). Significantly, few addiction studies have utilised scales outside of the TAS-20, but those that have yielded more insightful results. For example, a study conducted by Dorard et al., (2008) utilised the OAS rating scale alongside self-report questionnaires. The findings indicated that the OAS scores significantly correlated with self-report measures, but the findings were much more detailed in comparison. They concluded that this may be indicative of an alexithymic's reduced ability to acknowledge and report their feelings and emotions; a

consistently reported limitation across the data set. However, a study conducted by Preece et al., (2020) also revealed that the TAS-20 assessed alexithymia only for negative emotions, which they compared against the PAQ. Findings revealed that the PAQ assessed for both positive and negative emotions, whilst also displaying improved reliability for the heavily criticised externally oriented thinking component of the TAS-20.

In terms of addictive pathologies, alexithymia within alcohol addiction appears to be the most studied area. However, given the concerns highlighted with the TAS-20, coupled with less than 20 studies across the theme of addiction discussing or utilizing any other rating scale; it is not easy to gain a thorough and accurate insight into the implications of alexithymia within addiction cohorts. Furthermore, research surrounding opiate, non-opiate, and gambling addiction is scarce, with most only going as far as to say that there is an association with alexithymia. A further limitation to research in this area is the impact of other variables impeding upon the results. A significant variable that causes inconsistent findings throughout the data analysed is “trauma” (Bojarski et al., 2010; Evren et al., 2010; Wolff et al., 2016) and this is further highlighted within the Trauma, PTSD and Stress theme.

3.4.2 Trauma, PTSD and Stress

Interestingly, despite many historical studies implying that addiction often comes hand in hand with traumatic life events, alexithymia can often mediate the likelihood of addiction (Thorberg et al., 2011; Hamidi et al., 2010; Ghalehban & Besharat, 2011). This may explain why some individuals can experience trauma but not go on to have adverse life outcomes.

Whereas those with alexithymia may have increased vulnerability, lacking the core emotional skills needed to process, rationalise, and move forward from a traumatic experience (Brady et al, 2017; Gaher et al., 2016; Hyer et al., 1991; Bell & Naugle, 2008; Boisjoli & Hébert, 2020;

Boisjoli et al., 2019). Unfortunately, the relationship between trauma, addiction, and alexithymia is still relatively unclear. For example, some researchers have suggested that traumatic experiences, or environmental factors such as parenting can cause what is known as “secondary” alexithymia (Berenbaum, 1996; Chen et al., 2020; Fukunishi et al., 1996; Kooiman et al., 2004; Topciu et al., 2009; Wearden et al., 2005; Wingenfeld et al., 2011; Zlotnick et al., 2001). While primary alexithymia is thought to be a trait developed from a genetic predisposition (Jørgensen et al., 2007), secondary alexithymia is thought to be an “affective state” induced in later life. This opens a level of subjectivity within psychological research, as the classification of a traumatic event is open to interpretation. A car crash, the loss of a loved one, sexual, physical, or emotional abuse are all traumatic experiences that are difficult to measure or quantify in terms of their severity and impact on the individual. Many studies have identified an association between trauma and alexithymia, but many have failed to evidence that childhood abuse and neglect (Terock et al., 2016; Brown et al., 2018; Terock et al., 2020) as well as later life physical and sexual abuse (Brown et al., 2016; Brown et al., 2018), increases the likelihood of developing it. This poses the question as to whether alexithymia has indeed been induced or whether the alexithymia existed prior to the trauma.

It is rational to assume that because individuals with alexithymia do not possess the emotional tools required to overcome or manage the trauma incurred, this may exasperate their psychological distress, subsequently increasing the likelihood of them presenting within clinical populations (Hahn et al., 2016). Numerous studies support this assumption with findings identifying that individuals with alexithymia are at an increased risk of self-harm, suicidal ideation, implicit memory deficits, and display an increased need for primary care treatment (Hahn et al., 2016; Hébert et al., 2016; Joukamaa et al., 2008; Liu et al., 2021;

Minschew & D'Andrea, 2015; De Barardis et al., 2008). Moreover, it has been identified that those with alexithymia often report more severe symptoms of co-morbid mental health conditions (Brady et al., 2017; Chung et al., 2016a; Chung et al., 2016b; Zorzella et al., 2019; Carpenter & Chung, 2011; Chung & Chen, 2021; van Dijke et al., 2013). Such reports may assist in understanding why around 10% of the general population still meet the clinical criteria for alexithymia but appear less affected by its symptomology (Lichev et al., 2014). Those with borderline alexithymia, or those who have not experienced trauma, may continue to live everyday lives. However, the percentage is likely low in non-clinical samples due to the widespread nature and variety of trauma that individuals can experience.

A study assessing dissociative tendencies and alexithymia within 833 non-clinical participants can further complement such findings. The findings revealed that a history of trauma only elevated one area of alexithymia, particularly the difficulty identifying feelings component (Elzinga et al., 2002). Similarly, a non-clinical participant sample of 410 undergraduate students revealed that a history of childhood maltreatment which included an authoritarian parenting style, also only elevated the "difficulty identifying feelings" component of alexithymia (Gaher et al., 2015). This may indicate that while individuals who do not have primary alexithymia may display some alexithymic traits, they would not necessarily meet the full spectrum criteria for alexithymia per the current screening tools (Edwards, 2019). Consequently, it is plausible to assume that alexithymia shares similar characteristics to other psychological conditions (McLean et al., 2006; Wang et al., 2011). For psychological research purposes this may be problematic, as alexithymia scores may be falsely inflated by the presence of other co-morbid conditions that share similar symptomology and characteristics (Frewen et al., 2008; Kienle et al., 2017; McCaslin et al., 2006). An example of this is a study conducted by Dabkowska (2007) who looked for

correlations between alexithymia and PTSD. The findings revealed that PTSD symptomology did coincide with alexithymia. However, like previous findings (Zahradnik et al., 2009), this was only significantly correlated with one of the three components, specifically the difficulty identifying feelings component of the TAS-20.

In terms of PTSD research holistically, neuropsychological studies have found that PTSD is a separate entity to alexithymia (McCaslin et al., 2006; Frewen, 2006; Marchesi et al., 2000), with some being able to distinguish differences between PTSD and alexithymia within the thalamus and medial pre-frontal cortex of the brain (Frewen, 2006). Of course, FMRI studies usually entail small to medium cohorts and as such, it is difficult to apply such findings to widespread populations. Nevertheless, when alexithymia co-exists with PTSD the data revealed significantly exasperated symptomology, and a vulnerability to relapse following therapeutic interventions (Gaher et al., 2016; Hyer et al., 1991; Jakupcak et al., 2006; Paivio & Laurent, 2001). However, again such difficulties accessing and engaging with treatment may stem from the alexithymia and not necessarily the PTSD (Hyer et al., 1991). Miller and Johnson (2012) provide some support for this notion, they attempted to investigate whether symbolic representation (mental imagery) or Lexical representation (verbal capacity) was impaired in veterans with PTSD. Their findings revealed that those with PTSD showed greater symbolic representation, and no differences in Lexical representation in comparison to controls. This suggests that those with PTSD may be able to access treatment more effectively than those with co-morbid alexithymia.

Much like the PTSD research, studies surrounding stress and alexithymia is conflicting, with some identifying that the presence of it can increase poor responses to stress (Rahe, 1995; de Timary et al., 2008), and others finding no association (Lane et al., 1998; Lee et al., 2008;

McCaslin, 2006). Interestingly, a study investigating the impact of Early Life Stress found that differing regions of the brain appear to be affected by Early Life Stress in comparison to alexithymia (Aust, 2014). Furthermore, early life stress showed less affected areas within the brain specifically isolated to hippocampal responses. In comparison, when alexithymia was considered independently, it was associated with decreased responses in the Insula and temporal pole (Aust, 2014). Not only does this again cast doubt on the prospect of “secondary” alexithymia, but it also further reinforces the significance of the research area when considering its impact on the individual. Unfortunately, trauma is not the only co-morbid variable that appears to create conflict in alexithymia research, another controversial area is its relationship to depression.

3.4.3 Depression, Self-Harm and Suicidality

Whilst most studies agree that depression and alexithymia can co-exist (Conrad et al., 2009; Celikel et al., 2010; Anuk & Bahadir, 2018; De Berardis et al., 2008; Campanella et al., 2012), some researchers have implied that alexithymia scores decrease when depression is treated (Marchesi et al., 2008). This could dispute previously discussed findings and support the existence of “secondary” alexithymia, identifying it as an affective state. Marchesi et al. (2008) compared depression and alexithymia in women at the pre-morbid, depressive and remission stage, against a control group of non-depressed women. Their findings revealed that the TAS-20 scores were similar in the pre-morbid stage, significantly increased in the depression stage, and significantly decreased in the remission phase. Furthermore, no changes were observable within the non-depressed population sample. They concluded that if alexithymia scores fluctuate in line with various stages of depression, it could be assumed that alexithymia is more likely to be an affective state.

When critically evaluating this research two avenues must be explored, the first is the lack of clinically significant alexithymia scores across the depression data (Duddu et al., 2003). If it is to be assumed that alexithymia is a co-existing state associated with depression, it would be expected that much higher rates of alexithymia would be found within the population samples. However, some studies have found no evidence of alexithymia within clinically depressed participants (Hwang et al., 2008). Secondly, like previous findings, depression may share similar characteristics or symptomology to that found with alexithymia, and this could be superficially elevating alexithymia scores (Duddu et al., 2003; Kajanoja et al., 2018; Lee & Guajardo, 2011; Marchesi et al., 2008; Marchesi et al., 2000; Li et al., 2015; Muller et al., 2003). Evidence to support this is observable in a study conducted by Kajanoja et al. (2018), who collected TAS-20 scores from 57 clinically depressed individuals. However, unlike the previous study conducted by Marchesi et al. (2008), they examined the effects of serotonergic medication often used to treat depression. The findings revealed that serotonergic medication was associated with the difficulty identifying feelings component of the TAS-20, but no further components were significantly elevated. Similarly, a study evaluating major depressive disorder, alexithymia, c-reactive protein, and serum lipid levels indicated that only the difficulty identifying feelings component of alexithymia was associated with depression severity (De Berardis et al., 2008). This reinforces the importance of documenting the use of serotonergic medication during alexithymia studies, particularly when there is conflicting evidence that supports the stability of alexithymia scores within depression cohorts (Saarijärvi et al., 2001; Yilmaz et al., 2019).

Unfortunately, like previous findings, the presence of alexithymia alongside depression appears to exasperate symptomology of other co-morbid conditions; this is supported by studies within the theme that have found associations between alexithymia, heightened

rumination tendencies, self-harm, and suicidal tendencies (De Barardis et al., 2008; Di Schiena et al., 2011). Holistically, these findings continue to support the notion that alexithymia acts as a predisposition to negative life outcomes, displays genetic correlations (Picardi et al., 2011), and is non culturally specific (Ryder et al., 2008). One predominant negative life outcome found as a theme within the data set is the links between alexithymia and criminality.

3.4.4 Offending, Violent and Anti-social behaviour

Concerningly, offending, violent and anti-social behaviour appears prevalent within alexithymia research (Battista et al., 2021; Bianchini et al., 2019; Byrne et al., 2016; Engelstad et al., 2019; Hemmati et al., 2004; Howard et al., 2012; Jonson-Reid & Way, 2001; Kunjukrishnam & Varan, 1992; Louth et al., 1998; Möller et al., 2014; Parry et al., 2021; Porcelli, 2004; Preece et al., 2020; Rogstad & Rogers, 2008; Sifneos, 2000; Walsh et al., 2012; Zimmermann et al., 2006; Bakan et al., 2020; Berke et al., 2017; Chung & Chen, 2020; Cimbora & McIntosh, 2003; Garcia-Sancho et al., 2014; Garofalo et al., 2018; Grieve & Mahar, 2010; Honkalampi et al., 2004; Hsu et al., 2021; Kirsch & Becker, 2007; Konrath et al., 2012; Koven, 2011; Lander et al., 2012; Leshem et al., 2019; Neumann et al., 2004; Romero Martinez et al., 2019; Romero-Martinez et al., 2021; Simner et al., 2021; Teten et al., 2008; Bekker et al., 2007; Wachs et al., 2017; Wachs & Wright, 2018; Williams et al., 2018; Craparo et al., 2018). Given that historical research has continued to evidence disproportionately high emotional deficits within criminal cohorts, it is not surprising that alexithymia studies are on the increase within offender populations. Despite this, much of the literature to date is still within its infancy, as many of the studies within this theme failed to incorporate reliable and valid screening tools to measure alexithymia. For example, a study conducted by Hemmati et al., (2004) utilised the EQ-I screening tool to examine relationships

between emotional traits, psychopathology, depression, and hopelessness in an offender population. Findings revealed consistent deficits in emotional understanding, emotional processing and emotional intelligence (EI) among the participant sample. Similarly, a systematic review conducted by Garcia- Sancho et al., (2014) found that low levels of emotional intelligence in children, adults and across cultures was linked to higher levels of aggression. Whilst EI rating scales are not usually utilised to measure alexithymia, it is plausible to assume that those with alexithymia will display low levels of EI. Consequently, it was important to include such research within the scoping review. Studies such as this provide some indication that alexithymia may also provide a pre-disposition to criminality like that observed within the addiction theme. For example, a study conducted on juvenile offenders found that sexual offenders were twice as likely to have received special education for “severe emotional disturbance” (Jonson- Reid & Way, 2001). This suggests that emotional deficits were present and recognised prior to any offending behaviour. Such findings are also replicated within adult populations, whereby it is suggested that the most violent crimes such as murder, attempted murder, serious assaults and intrafamilial violence are more likely to be committed by individuals who display signs of affective disorders (KunJukrishnan & Varan, 1992). In addition, the studies that did incorporate reliable and valid screening tools such as the TAS-20 found that alexithymia was a predictive factor for juvenile and adult delinquency (Berke et al., 2017; Zimmermann, 2006). For example, one study reported that difficulties in identifying feelings, difficulties in describing feelings and emotional non acceptance, accounted for increased physical aggression, anger and hostility across both offender and community populations (Garofalo et al., 2018). However, like previous findings the research is limited, and only goes as far as to say that alexithymia is associated with offending behaviour, with extraordinarily little progress being made in terms of preventative research. The importance of fulfilling this gap in the literature is highlighted

by a study conducted by Romero-Martinez et al., (2019) who found that high traits of alexithymia appear to lead to high recidivism and prominent levels of treatment dropout amongst offenders of intimate partner violence. Such findings remained significant despite other contributing variables such as impulsivity and substance misuse. This suggests the need for effective screening tools to be developed that would streamline rehabilitation pathways for those with alexithymia. Nevertheless, such screening tools cannot be developed until the discrepancies between the correlated variables can be understood.

Unfortunately, much of the literature in this theme appears to be impacted upon by similar issues to those discussed previously in other themes. For example, the TAS-20 again appears to be the most predominant screening tool used, with only a select few studies utilising alternatives such as the BVAQ or PAQ (Bekker et al., 2007; Preece et al., 2020; Parry et al., 2021). Consequently, the same limitations surrounding self-report measures continue to be problematic. Furthermore, there continues to be discrepancies surrounding trauma and early childhood experiences, with some literature concluding that environmental factors appear to contribute towards difficulties in identifying and communicating feelings, whereas genetic factors seem to contribute towards a tendency to focus on external, rather than internal experiences (Van't Wout et al., 2007). However, like previous findings, there is evidence to suggest that an ability to regulate emotions effectively following trauma, acts as a protective factor amongst criminal populations (Walsh et al., 2012). As such, this may again suggest that trauma is not the predominant factor leading to negative life outcomes, but rather the presence of alexithymia prevents such trauma from being processed, understood, and verbalised. Thus, acting as a cumulative effect increasing the likelihood of criminality in later life. One heavily researched area of criminological research is parenting, as it is believed that parental capabilities have some involvement in the development of deviant behaviour.

3.4.5 Parenting

To explore this further the literature pertaining to the theme of parenting was evaluated. Only a small number of studies appear to acknowledge the role parenting may play in the development of alexithymia (Edel et al., 2015; Hawley et al., 1995; Karukivi et al., 2011; Jørgensen et al., 2007; Kefeli et al., 2018; Kench & Irwin, 2000; Mallinckrodt et al., 1998; Mallinckrodt & wei, 2005; Morie et al., 2020; O'loughlin et al., 2018; Rozanski et al., 2021; Swannell et al., 2012; Tam et al., 2020). For example, Karukivi et al., (2011) explored the associations of perceived social support and parental attitude within alexithymic adolescents. In contrast to their hypothesis, their findings indicated that intrusive and overprotective parental attitudes may be a possible risk factor for the development of alexithymia. This is interesting given that much of the historical studies surrounding the development of criminality is centred around passive parenting; presenting evidence that a lack of parental care and boundaries, increases the likelihood of criminal activity (Farrington, 2005; Moffitt, 2017). This begins to highlight that those early studies surrounding criminal typologies and life course persistent offending, needs to be re-evaluated in line with recent alexithymia findings.

One large twin study within the parenting theme substantiates this assumption. The study included 8,785 twin pairs and findings reported that genetic factors play a significant and noticeable role within all facets of alexithymia, with only a moderate influence being found amongst shared environmental factors. Some studies have implied that these overlapping findings are indicative of the reduced attachments that will likely occur in individuals with alexithymia regardless, due to their lack of reciprocal behaviour in sharing feelings and emotions (O'Loughlin et al., 2018). There is a lack of research that focuses particularly on

parenting styles to enable a clear and concise understanding of where genetics, parenting or both sit within alexithymia research. The parenting theme, coupled with previously discussed findings, appears to suggest that alexithymia may be a genetic pre-disposition. However, given that parenting, and attachment styles have historically been evidenced to influence outcomes within adulthood, such as the development of psychiatric disorders (Arman et al., 2018; Ni & Gau, 2015; Gul et al., 2019), it is important for this gap in the literature be addressed.

3.4.6 Psychiatric, Eating and Sleep Disorders

Research surrounding psychiatric conditions and alexithymia is another area of study still within its infancy. Limited studies have attempted to explore whether alexithymia has an association with personality disorders (Berenson et al., 2018; Webb & McMurrin 2008; Irwin & Melbin-Helberg, 1997; Kirmayer et al., 1994; Loas, 2012; Loas et al., 2012; Nicolò et al., 2011; Nicolò et al., 2012; Williams et al., 2011). Initially, findings suggested a high prevalence rate of alexithymia across dissociative, borderline, and anti-social personalities (Berenson et al., 2018; Kirmayer et al., 1994; Webb & McMurrin, 2008). However, some of those studies incorporated non-clinical samples and therefore should be viewed with caution given the minimal levels of alexithymia noted within non-clinical populations. Therefore, critically analysing studies that utilised a clinical cohort may provide better insight into the links between alexithymia and personality disorders. Nicola et al., (2011) utilised the TAS-20 to evaluate this within a cohort of 388 patients recruited through an outpatient clinic. They found that 24% of participants met the criteria for alexithymia, 21 % were deemed to be underdetermined and 55% fell within the non-alexithymia category. Upon further investigation they found that those experiencing cluster A and C personality traits were more likely to report greater levels of psychopathology and social difficulties in the alexithymic

and undetermined group than those in the non-alexithymia groups. These findings are consistent with that of the previously discussed themes in that, alexithymia may exasperate symptoms of other co-morbid conditions. However, when critically evaluating such findings, Loas et al., (2012) suggests that consideration needs to be given to the possibility that shared symptomology may be falsely elevating alexithymia scores. This was supported by his findings in 59 patients with a well-established diagnosis of personality disorder, who were deemed to be more alexithymic than healthy controls prior to controlling for anxiety and depression. Given that research has already begun to highlight the difficulties in assessing alexithymia alongside depression, Nicola et al., (2012) conducted a follow up study controlling for this. They found that alexithymia is a distinct construct from that of personality disorder, but that it appears to be a feature of avoidant personality disorder.

Psychiatric disorders will continue to play a significant role in understanding alexithymia, as emotional deficits are symptomatic of many mental health conditions. Schizophrenia is an example of a condition which presents with difficulties in emotional disturbances (Ahmed et al., 2018; Engelstad et al., 2019; Berenbaum et al., 2003; Gearon et al., 2001; Hsu & Ouyang, 202; Kubota et al., 201). However, studies conducted to explore the relationships between alexithymia and schizophrenia have found that alexithymia is present in both schizophrenic patients, non-psychotic psychiatric patients, and healthy controls, with no significant difference between the cohorts (Heshmati et al., 2010). Despite this, evidence again suggests that when patients with psychiatric disorders display co-morbid symptoms of alexithymia, treatment outcomes are less effective (Heshmati et al., 2010).

Additionally, due to the complex nature of psychiatric disorders, sleep disorders commonly co-occur alongside many of these conditions. Consequently, a few limited studies attempted

to explore associations, if any, between sleep disorders and alexithymia (Bauermann et al., 2008; De Gennaro et al., 2004; Lundh & Broman, 2006). Rationally, this is important to consider given the well documented effects of sleep deprivation on cognitive functioning. To date however, the research in this area is conflicting. Whilst some studies have found increased symptoms of sleep disorders in alexithymia patients (Bauermann et al., 2008), others have suggested that when anxiety and depression is accounted for, this increase is non-significant (De Gennaro et al., 2004; Lundh & Broman, 2006).

It is noteworthy that sleep disorders can frequently occur in individuals with ADHD. Furthermore, impulsivity has been continuously highlighted as a trait associated with alexithymia (Bibby, 2016; Garofalo et al., 2018). Despite this, there has been minimal research into ADHD and its connection with it. Only one study on ADHD met the inclusion criteria for the scoping review (Friedman et al., 2003). This study aimed to investigate the emotional responses of participants with ADHD whilst watching films that depicted emotional interactions. The findings suggested that adults with ADHD used less emotive words in comparison to control groups, despite rating the emotions viewed within the scenes as more intense than controls. Conclusions indicated that those with ADHD may overreport emotions to mask emotional deficits. Whilst these findings are limited, it continues to evidence the complexities needing to be considered within alexithymia research. The use of self-report measures continues to be a limitation, particularly if participants are over reporting emotions to mask hidden inabilities.

Another disorder which appears to be affected by overcompensation is eating disorders. alexithymia has been considered alongside eating disorders in numerous studies, with most acknowledging its existence as a co-morbidity (Berger et al., 2014; Berthoz et al., 2007; De

Berardis et al., 2007; Fenwick & Sullivan, 2011; Hund & Espelage, 2005; Larsen et al., 2006; Mazzeo & Espelage, 2002; Minnich et al., 2017; Parling et al., 2010, Quinton & Wagner, 2005; Rastam et al., 1997; Ridout et al., 2010; Ridout et al., 2011; Speranza et al., 2005; Speranza et al., 200; Stodl & Wylie, 2020; Van Strien & Ouwens, 2007). However, much like the findings throughout the data, when Depression and Anxiety is accounted for, there appears to be no significant difference between those with eating disorders and healthy controls (Parling et al., 2010). Nevertheless, the literature pertaining to eating disorders continues to substantiate that the presence of alexithymia reduces the success of treatment (Fenwick & Sullivan, 2011). Interestingly, some studies suggest that alexithymia associated with eating disorders is more prevalent in emotional overeating than that of under consumption (Larsen et al., 2006; Van Strien & Ouwens, 2007), and this appears to be the case even when depression and anxiety have been controlled for (Larsen et al., 2006). Considering that somatic complaints are a symptom of alexithymia; it is possible to assume that food is an attempt to fulfil a similar void to that discussed within the addiction theme. For example, the physical feelings of overindulgence may inflate positive affect and increase arousal, which those with alexithymia may struggle to feel naturally (Hamidi et al., 2010), leading to a desire to chase the satisfaction that food brings. Concerningly, despite the plethora of information supporting that alexithymia impedes upon treatment outcomes, treatment options were identified in the scoping review as one of the smallest areas of development within psychological research.

3.4.7 Treatment Options

With only 24 studies meeting the inclusion criteria for being categorised into this theme (Baikie, 2008; Bakan et al., 2020; Horneffer & Chan, 2009; Hsu & Ouyang, 2021; Lee et al., 2019; Lukas et al., 2019; Luminet et al., 2011; McMurrin & Jinks, 2011; McCallum et al.,

2003; Morie et al., 2015; Nan & Ho, 2017; Neumann et al., 2017; Ogrodniczuk et al., 2005; Ogrodniczuk et al., 2011; Quilty et al., 2017; Simha-Alpern, 2007; Spek et al., 2008; Speranza et al., 2011; Stingl et al., 2008; Stingl et al., 2021; TARRIER et al., 2001; Vanheule et al., 2010; Vermeulen, 2011; Yilmaz et al., 2019), it is likely that treatment outcomes are still underdeveloped due to the lack of holistic understanding of alexithymia outlined within the previous themes. For example, much of the literature to date implies that alexithymia is distinct from other disorders, and that it exacerbates symptoms of co-morbid mental health conditions. However, all the studies to date isolated alexithymia alongside a specific area of mental health and wellbeing, be that addiction, trauma, criminality or alongside an individual psychiatric disorder. Consequently, whilst this has provided useful insights into individuals with alexithymia, and substantiated the importance of the study area, it has failed to identify any general typologies, potential pathways or risk assessments that would equip clinicians to treat it effectively.

There has been a variety of interventions trialled to date ranging from non-clinical interventions such as expressive writing (Baikie, 2008; Horneffer & Chan, 2009), to more structured clinical interventions such as CBT (Hsu & Ouyang, 2021; Quilty et al., 2017). Whilst some interventions have generated positive results, there are criticisms to be considered. An example of this, is a study conducted by Baikie (2008) who attempted to explore the benefits of expressive writing for alexithymic individuals against a control group. The findings revealed that expressive writing was more beneficial to those who scored higher on alexithymia rating scales. However, this study incorporated a cohort of 88 university students rather than a clinical sample. Therefore, given the previous literature, it is likely that the prevalence and severity of alexithymia within this population sample, was not indicative of those who are detrimentally affected by it. Furthermore, given the lack of risk assessments

available for those with alexithymia, risk factors appear to be currently under considered for treatment options. An example of this is a study conducted by Horneffer and Chan (2009), who attempted to explore journaling and relaxation techniques with 217 participants. Participants in this study were assigned to a full treatment group, relaxation only group, journaling only group and a control group, and the results revealed a high interaction within the full treatment group for those displaying elevated levels of alexithymia. However, these participants also reported increasing levels of emotional distress in the days that followed this intervention. This study emphasises the need for caution to be taken when considering treatment options, and a need to determine the risk factors that are associated with alexithymia.

Despite this, the treatment options theme enabled insight into considerations for future interventions. For example, a study conducted by Lee et al., (2019) indicated that Art Therapy, in a structured and safe environment, can improve the difficulty identifying feelings component of alexithymia. However, the findings also reported a reduction in depression following the therapeutic intervention. Therefore, given that the previous literature highlights that depression may overinflate alexithymia scores, it is possible that this reduction may be indicative of a therapy that successfully supports depression as opposed to alexithymia. Focusing on clinical interventions, one study utilised CBT with 73 methadone maintained and cocaine dependent individuals (Mori et al., 2015). They utilised a control group of stand-alone Methadone Maintenance, and an intervention group that included Methadone Maintenance alongside CBT. Alexithymia scores were measured at pre and post treatment and follow up scores were also taken. Intriguingly, alexithymia scores remained stable throughout, but cocaine positive urine samples reduced, and self-reports suggested increased

and longer periods of abstinence. Subsequently, CBT appeared to assist with a reduction in substance misuse, but alexithymia remained untreated.

A potentially positive avenue for further study found within the literature is the use of oxytocin. Oxytocin is a naturally occurring hormone produced in the hypothalamus and secreted from the pituitary gland (Anagnostou et al., 2014). Externally to alexithymia literature, it has been suggested that Intranasal oxytocin improves emotional recognition across a variety of different population samples such as those with autistic spectrum disorders (ASD) (Anagnostou et al., 2014). Subsequently, given that ASD shares similar characteristics to alexithymia, this treatment pathway was further explored within alexithymic patients. Results suggested that the Oxytocin had no impact on low scoring Individuals with alexithymia, but it was effective in improving socio-emotional abilities in those with high scores (Luminet et al., 2011). Whilst these are novel and interesting findings the study is not without its limitations. Firstly, the study included a male only student population, making the generalisability of the results limited given the issues surrounding alexithymia in non-clinical samples, and the gender bias. Secondly, when considering that alexithymia has been heavily linked to addiction, researchers would need to consider the ethical implications of asking addicts to inhale a substance through nasal inhalation. However, oxytocin can also be stimulated naturally within the body when individuals are exposed to positive social interactions (Heinrichs et al., 2009). Therefore, this may support the use of group therapy to treat alexithymia. Nevertheless, the literature pertaining to group therapy is fraught with inconsistencies, with some evidence of success (Yilmaz et al., 2019) and failure (Ogrodniczuk et al., 2005; Ogrodniczuk et al., 2011). Despite this, these inconsistencies could be rectified by practitioner training, as several studies have suggested that clinicians can display bias when treating individuals with alexithymia, and this can impact on the

therapeutic alliance within treatment (Vanheule et al., 2010; Speranza et al., 2011; Ogrodniczuk et al., 2011), thus impeding the person's ability to stimulate oxytocin release naturally. Consequently, such findings provide further evidence that typologies, pathways, and risk assessments would aid clinical understanding of alexithymia and provide practitioners with clear and concise guidance surrounding which of their patients may be more likely to present with it. Such suggestions are further substantiated by the results of a three-year long study conducted by Speranza et al., (2011), who found that patients with alexithymia were more likely to receive more prescriptions for co-morbid conditions, and less therapy than their non-alexithymic counterparts.

3.5 Discussion

The scoping review aimed to answer three research questions, question (1) established seven main themes throughout the literature analysed. All 7 themes highlighted that alexithymia is often associated with negative life-outcomes, less effective treatment outcomes, and exasperates the symptomology of other co-morbid conditions. Furthermore, there are continuing challenges surrounding current screening tools. In particular, the TAS-20 has faced much scrutiny with other options, such as the PAQ, appearing to be more effective at incorporating positive and negative emotions. Also, although observer rating tools do exist, it is clear to see how such tools could create challenges for researchers. Gaining consent from participants and recruiting family members to provide further information, may be more time-consuming. Such issues could potentially be exasperated within clinical populations, particularly within substance misuse cohorts, given that relationships and family ties can often be fractured by addiction. Moreover, the studies which utilised observer tools such as the OAS, appear to significantly correlate with self-report measures such as the TAS-20 and

BVAQ. Consequently, this reduces the argument to use them, particularly within clinical populations.

Research question (2) sought to evaluate what treatments options were available to those with alexithymia, and the findings to date suggest no concretely successful treatment has been identified. Furthermore, it reinforced the evaluations found throughout the themes, that those with alexithymia are more likely to be vulnerable to clinician bias, and present more severe symptomology across a multitude of co-morbid conditions. Such symptomology also is further exasperated by their inability to access current treatment options effectively. These findings, coupled with the discrepancies found within the themes, provided some clarification on research question (3) What gaps in the literature can be identified from this review.

This review suggests that there is a lack of holistic oversight in alexithymia literature, inhibiting progress in treatment pathways for alexithymic individuals. The overall findings imply that alexithymia may be a spectrum, and the presence of trauma or co-morbidities may increase the risk of negative life outcomes. Typologies and profiling have been used in criminological studies to understand correlations with criminality, but this type of research could now be applied to alexithymia. Future studies in this thesis will therefore seek to expand upon the findings within the scoping review by developing questionnaires that incorporate alexithymia and socio-demographic questions. This data can then be used to highlight how the differing components of alexithymia, including both positive and negative emotions, interacts with differing life experiences such as trauma, addiction, parenting styles, offending, co-morbidities and treatment outcomes. Not only will this research provide a better insight into whether alexithymia is a trait or an affective state, it may identify risk factors and provide insight into future treatment options.

3.5.1 Limitations

The scoping review conducted adhered to the scoping review framework developed by Arksey and O'Malley (2005) and the updated JBI guidelines (Peters et al., 2020) to ensure a methodological process. However, there were some limitations, the first was the extent to which alexithymia overlaps between psychological and medical research. This led to a broader selection of literature than expected despite attempts being made to narrow this down utilising the keywords. Another limitation appears to be a general lack of awareness of alexithymia within psychological research. For example, many studies referred to somatisation or a lack of emotional clarity that could have signified the presence of alexithymia. However, alexithymia was not directly addressed, referred to or screened for within the studies. Consequently, such studies were not included in the scoping review to ensure the research remained rigorous. However, such studies may have provided additional insights into alexithymia.

3.5.2 Conclusions

The scoping review confirmed suspicions highlighted from the preliminary searches of literature, that a need for holistic oversight was required due to the complexities associated with alexithymia. The findings have revealed that those with alexithymia are more vulnerable to negative life outcomes and current treatment options are rendered virtually inaccessible to them. Finally, the current findings have rigorously demonstrated that an increased awareness of alexithymia may facilitate better therapeutic relationships with vulnerable populations, maintain higher therapeutic retention rates and assist to generate clearer treatment pathways.

Chapter 4. Applying Theoretical Framework Following the Scoping Review

4.1 Chapter Overview

This chapter delves into the application of narrative theory in the context of alexithymia research, highlighting its emerging significance across various disciplines. The methodological approach to this chapter is summarised here, with further detail outlined previously within the methodology chapter (see section 2.6.2).

The narrative review process involved a comprehensive literature search aimed at gathering diverse perspectives on the subject. The selection criteria were intentionally kept flexible to encompass a wide array of relevant literature. Data extraction focused on summarising and synthesising findings that are crucial for understanding the intersection between narrative theory and alexithymia, especially considering comorbid mental health conditions.

Ultimately, this chapter underscores the value of adopting narrative theory in research methodologies to better capture the complexity and depth of individual experiences. It presents a structured yet adaptable framework that aligns with the diverse human experiences encountered in alexithymia research, preserving the essential elements of individual narratives while promoting innovative research approaches. This narrative-centric approach not only maintains the continuity of the initial scoping review findings but also enhances the subsequent phases of research by focusing on the richness of personal stories and theoretical insights.

4.2 The importance of incorporating narrative approaches within psychological research: narrative theory

Narrative psychology revolves around exploring the composition, substance, and purpose of the narratives we share with one another and internalise during social encounters. This field acknowledges the significant role stories play in shaping our understanding of the world, including how we perceive and interpret the actions of others and ourselves (Murray, 2003). Narratives have a reciprocal influence on both our individual identities and the world we inhabit, forming an inseparable connection between storytelling and the construction of our realities (Murray, 2003).

Despite quantitative approaches dominating psychological research over the last century (Powell et al., 2008), many researchers have begun to take a more personal approach by exploring the inner narratives of individuals to gain deeper insights into human experience (Kirkman, 2002). In essence narrative theory works on the assumption that individuals do not break down their experiences word by word, or sentence by sentence, but instead cluster experiences together as a series of stories throughout their lives (Murray, 2003). When considering narrative theory in the context of psychological research, it is possible to argue that modern psychological approaches fail to facilitate the broader exploration of narrative experiences and how they can be used to understand human behaviour. For example, quantitative studies often require individuals to restrict themselves to a single response, and whilst there is often a choice of responses, it is likely that a person's experience rarely fits neatly into a box (Britten, 1995). Similarly, although narrative theory is more in congruence with qualitative approaches, Thematic Analysis (TA) and Interpretative Phenomenological Analysis (IPA) both involve "coding" data, whereby researchers are encouraged to look for a collection of words or sentences for later analysis (Connor & Joffe, 2020). This has resulted

in criticisms of the coding process which often forms the foundation of beginning to decipher the qualitative data (Connor & Joffe, 2020). Consequently, the broader narratives of individuals may become lost in the process of deducing their experiences to a few sentences which are then used as a comparison amongst the population sample to formulate themes.

A narrative imparts a distinct form, organisation, or storyline to a series of occurrences. Across diverse cultures, numerous such plotlines exist, which we can utilise to influence our understanding of events. In clinical psychology the plotlines of individuals are often observable within “the clinical interview”. In such interviews, a thorough and detailed assessment is undertaken taking into consideration a person’s narrative story from birth up to their presentation within the clinical setting (Logan, 2018). The clinical interview is deemed “good practise” particularly during diagnostic processes, as it enables the clinician to obtain a thorough understanding of the individual across differing points of their life. It is, therefore, the series of events that become relevant in this process, which enables the clinician to determine whether the current clinical presentation has developed overtime, possibly because of environmental influences, or whether symptoms existed prior to the life events (Jones, 2010). Arguably, the clinical interview constitutes a narrative approach, as it clusters experiences together to form a series of stories, rather than evaluating a single point of time, or specific words or sentences relative to a single experience.

For research purposes, a limitation of the clinical interview is that it only explores the narrative experience of one individual and does not allow for comparisons across a population sample without combining the results of multiple interviews. Such process would not only be lengthy, but would likely result in a deductive exercise, utilising qualitative methods such as coding and interpretation of words or sentences for the purposes of

identifying themes. As previously stated, such processes reduce the narrative of the individual to singular events and forgo the benefits derived from understanding the sequential series of events.

The clinical interview is not the only area of psychology that evidences the benefits of incorporating narrative approaches. Within the area of criminal psychology, narrative stories are consistently embedded in criminal processes. For example, a criminal trial aims to present the opposing narratives of the prosecution and the defence to a panel of peers. In addition, custodial and probation procedures often entail therapeutic work being undertaken to challenge the narrative stories of the offender (Morash et al., 2020; Maruna & Ramsden, 2004). Finally, even after the offender exits the criminal justice system, their narrative continues to play a role in securing employment, developing social circles, and building or rebuilding relationships with family members. It is not surprising therefore, that criminology has incorporated “Narrative Criminology” as an approach to explore how stories of offenders are constructed and the implications of this on the development of criminality (Maruna & Liem, 2020). Narrative approaches have also been utilised in criminology to explore therapeutic processes such as the reintegration of offenders and to assist victims of crime to overcome their experiences (Maruna & Liem, 2020).

Similarly, the applicability of Narrative theory in everyday therapeutic processes is not just linked to criminology, it is also widely documented within many forms of therapy. However, the professionals using such processes may not even recognise that they use it. For example, many counsellors, therapists, and psychotherapists emphasise the need to explore a person’s “life story” in a safe and secure environment (Rose, 2012; Etherington, 2009; Irving, 2011). This is because those experiencing psychological discomfort can often develop dominant

“plotlines” that may have become cognitively distorted over time. Some therapists argue that when dominant plotlines occur, such as “I am a victim”, they can occur from a series of events that over time has challenged the individual’s sense of self and identity (Park et al., 2009; Marsh et al., 2011). An individual with this dominant plotline may have been the victim of a series of assaults physically and/or emotionally over an extended period thus creating the dominant plotline of them viewing themselves as a victim. Therapeutic practitioners, therefore, seek to re-construct the person’s life story, allowing them the freedom to report their own narrative, whilst being accompanied by a professional to facilitate an objective oversight (Irving, 2011). This does not change the series of events, or indeed the narrative story of that individual. However, when cognitive distortions such as “I was weak”, “I enabled it to happen”, are challenged, the client can begin to view the events more objectively, perceiving themselves as possible warriors for overcoming such adversity instead of victims of their circumstances (Rashidi, Morda & Karnilowicz, 2021).

Despite its benefits, the limitations of the narrative approach are evident. For example, researchers may suggest that narratives are interchangeable in that they may become distorted over time, or, that such narratives are too subjective to form a basis for scientific research. It is posited however, that these limitations are not indifferent to those present in many psychological constructs such as intelligence and self-control. Research in these constructs can never perfectly address their underlying psychology (Maruna & Liem, 2020). One way to overcome the subjectivity of narrative stories may be the incorporation of objective testing to facilitate and maintain the importance of the life event to the individual, and even the series of life events reported by them, whilst removing the subjectivity of those events.

The findings of the scoping review revealed many factors, or life experiences, which may contribute towards the development of alexithymia symptomology, and, that such symptomology may impede upon therapeutic pathways. Consequently, it seems that understanding the narratives of individuals may assist in determining whether alexithymia is an affective state, a genetic pre-disposition, or a combination of both. In conjunction, it may also facilitate ideas for future treatment pathways. It is therefore proposed that the existing literature may assist in developing a narrative experience questionnaire, which can be incorporated alongside reliable alexithymia screening tools, to identify narratives associated with alexithymia symptoms.

4.3. The Smallest Space Analysis (SSA) Approach to Valuing Individuals within Thematic Development

Utilising the existing research enables life events to be objectively considered as part of a person's individual narrative story. For example, by asking questions such as "Have you ever had a serious accident at work, in a car, or somewhere else" or "Have you ever been convicted or charged with a violent offence" provides the opportunity to document the narratives of that individual but reduces the likelihood of the individual to report distorted versions of such events or misrepresent them. Their individual answers to such questions can then be incorporated into a smallest space analysis (SSA) to provide an object overview of those narrative responses in combination with the responses of others in a similar population sample.

The benefits of using SSA include the ability to uncover complex relationships between variables, which are not easily discernible through traditional methods (Gelman & Hill, 2006). SSA is useful for uncovering patterns in data which have multiple levels of

complexity (Shye et al., 1994). SSA works by calculating and ranking the correlations between each item explored and presents them in an association matrix. This matrix is then used to create a visual representation of the data, with each point characterising the variables explored (Guttman, 1968). The distance and correlation between these points are compared repeatedly to calculate the rank order, with a closer rank order indicating a healthier visual representation to the original data matrix. This visual representation then allows themes to be identified, meaning that when variables are located closer together, they can then be thematically analysed to identify “narratives” across the broader population sample. Consequently, these narratives will have been formed through the comparison of the individual narratives obtained during data collection.

The SSA approach facilitates the effective use and incorporation of narrative approaches in psychological research, whilst also addressing some of the traditional limitations associated with it. This approach supports the psychological underpinnings of qualitative research through valuing the input of the individual, whilst also incorporating the objectivity that quantitative approaches strive to achieve.

Chapter 5. Utilising Smallest Space Analysis (SSA) to Apply the Narrative Approach to the Understanding of the Alexithymic Profile

5.1 Chapter Overview

This chapter applies the innovative use of Smallest Space Analysis (SSA) in exploring narrative theory within the context of alexithymia and co-morbid mental health research. Thus highlighting SSAs ability to integrate detailed personal narratives into a structured analytical framework. This methodological integration addresses key challenges in researching psychological constructs shaped by diverse life experiences, providing a robust platform for gaining insights into the interplay of narratives in alexithymia. This approach not only preserved individual stories but also fostered a deeper understanding of the generalisable patterns that emerge from complex narrative data.

5.2 Introduction

Following on from the conclusions of the scoping review the main findings set out that the TAS-20, currently the most widely used screening tool, has revealed higher levels of Alexithymia occurring within clinical cohorts than in control groups (see sections 3.4 & 3.5). Furthermore, studies indicated that individuals with substance misuse and offending backgrounds possess higher alexithymia scores than other clinical samples (Hamidi et al., 2010, see also sections 3.4.1 & 3.4.4). This prompted consideration into the potential role of alexithymia in addictive behaviour. It was postulated that individuals with alexithymia engage in addictive activities to inflate positive affect, cope with negative affect, increase arousal and assist in them socialising with others (Hamidi et al., 2010).

Furthermore, the scoping review (see chapter 3) outlined the benefits of utilising the TAS-20 in providing an understanding of the differing components of alexithymia and discerning which components, if any, are associated with other variables (Leising et al., 2009). For example, Saladin et al (2012) identified that only two of the four components of alexithymia contributed towards fractured relationships with key workers and therapists within alexithymic populations. These were difficulty identifying feelings (DIF) and difficulty defining feelings (DDF) rendering treatment services less accessible to those experiencing alexithymia. However, the suitability of the TAS-20 has been questioned (Dorard et al., 2008; Thorberg et al., 2009; Thorberg et al., 2010). Issues included its factorial validity and reliability with some items exhibiting non-trivial loading, weak loading, and weak influence on the factors they were expected to measure, particularly within the externally oriented thinking (EOT) component (Thorberg et al., 2010; Preece et al., 2020).

In addition, the scoping review (chapter 3) revealed that few studies have alternatives to the TAS-20, but those that have brought forth interesting results. Dorard et al. (2008) for example, employed the Observer Alexithymia Scale (OAS) in combination with self-report questionnaires. The findings evidenced that OAS scores strongly correlated with TAS-20 scores. Furthermore, they suggested that the OAS results were more insightful, enabling the evaluation of alexithymic traits independently from self-report measures. This better illustrates respondents' reduced capacity to recognise and report their emotions and feelings, which was a recurrent limitation in the data set. Moreover, Preece et al. (2020) examined the TAS-20's assessment of alexithymia in comparison to a different self-report measure known as the Perth Alexithymia Questionnaire (PAQ). Their findings revealed that the PAQ accurately gauged both positive and negative emotions, as well as demonstrating better

validity for the TAS-20's controversial EOT element. These findings better enabled researchers to understand Alexithymia across 10 components, in comparison to the four broad areas initially proposed within the TAS-20.

Research into alexithymia remains in its preliminary stages with numerous correlational studies seeking to utilise the screening tools to examine links between alexithymia and psychopathology. The findings so far suggest that traumatic experiences and environmental factors can lead to the development of “secondary alexithymia” (Berenbaum, 1996; Chen et al., 2020; Fukunishi et al., 1996; Kooiman et al., 2004; Topciu et al., 2009; Wearden et al., 2005; Wingenfeld et al., 2011; Zlotnick et al., 2001). This type of alexithymia is thought to be an affective state brought about later in life, in contrast to “primary alexithymia” which is believed to be due to a genetic predisposition (Jørgensen et al., 2007).

As highlighted within the scoping review findings, this distinction between primary and secondary alexithymia may be problematic as it increases the likelihood of subjectivity within the research. Examples of this included the classification of a traumatic event being open to interpretation. A car crash, the loss of a loved one, sexual, physical, or emotional abuse are all traumatic experiences that are difficult to measure or quantify in terms of their severity and impact on the individual. While many studies identified an association between alexithymia and trauma, the evidence between childhood abuse and neglect (Terock et al., 2016; Brown et al., 2018), and later life physical or sexual abuse (Brown et al., 2016; Brown et al., 2018) with alexithymia development, is not robust. This poses the question as to whether alexithymia is induced or predates trauma experiences.

Should alexithymia exist prior to trauma, it is rational to assume that these individuals may not possess the emotional tools required to overcome or manage their traumatic experience. This would exacerbate psychological distress and increase the likelihood of them presenting within clinical populations (Hahn et al., 2016). This is substantiated by several studies that highlighted increased risks for self-harm, suicidal ideation, implicit memory deficits and an increased need for primary care treatment (Hahn et al., 2016; Joukamaa et al., 2008; Liu et al., 2021; Minshew & D'Andrea, 2015; De Barardis et al., 2008). Such reports propose possible reasoning as to why ~10% of the general population meet the clinical criteria for alexithymia, yet appear less affected by its symptomology (Lichev et al., 2014). Those with borderline alexithymia, or those who have not experienced trauma, may continue to live normal everyday lives. However, due to the widespread nature and variety of trauma which individuals can experience, the percentage of such individuals in non-clinical samples is likely to be low. Elzinga et al. (2002) found that 833 non-clinical participants with a history of trauma, only displayed heightened alexithymia scores for the “difficulty identifying feelings” component. Similarly, a study of 410 undergraduate students revealed that childhood maltreatment, including an authoritarian parenting style, also only increased the difficulty identifying feelings aspect of alexithymia (Gaher et al., 2015). This may suggest that individuals who do not have primary alexithymia might have some traits, however, they would likely not meet the criteria for full spectrum alexithymia according to current screening tools (Edwards, 2019).

Given the inconsistencies in the existing literature, it is difficult to determine whether secondary alexithymia exists, or whether primary alexithymia acts as a psychological vulnerability that restricts a person's capacity to overcome environmental influences or trauma. In addition, it appears that the TAS-20 may not be adequate to explore how

alexithymia relates to other variables. Thus, utilising the PAQ may be more beneficial, given that it can further segment alexithymia, allowing researchers to inspect both positive and negative emotions. Alternative screening tools such as the Observer Alexithymia Rating Scale (OAS), provide valuable observer insight, however, also provides challenges to utilise. Obtaining consent for third party information from participants and recruiting family members to offer additional information, is often problematic for clinical populations. For example, within substance misuse cohorts, it is likely that addiction may have caused damage to close relationships and family ties.

The arguments presented surrounding whether alexithymia is an affective state, personality trait, or a symptom of another condition may be better resolved by re-evaluating the term alexithymia as a "one size fits all" label. The discrepancies in the literature may be likened to the early arguments of other psychological conditions, such as Autism, which is now seen as a spectrum of neurological differences, varying in severity with diverse effects. This shift in perspective enables clinicians to better identify it and assess its impact on the individual (Wolff, 2004). Thus, a similar approach could be taken to alexithymia to better understand its nuances and effects.

Consequently, it is possible that alexithymia exists on a spectrum, with some experiencing more severe adverse effects. Therefore, environmental, and psychological factors such as trauma or a concurrent mental health condition may intensify its symptomology. When likening this to ASC, the presence of it, does not necessarily require clinical intervention, however, when ASC is combined with (for example) sensory processing disorders, or environmental stresses, the likelihood of required intervention increases (Kraepel et al., 2017). In essence, individuals with alexithymia may require minimal support, but those co-

presenting with a history of trauma may need to be identified so they can be supported accordingly.

Despite the benefits of narrative theory for generating evidenced based theory (see section 2.6.2 and chapter 4), it is rarely used within other areas of psychology beyond criminology. Given the plethora of associations identified in the literature between alexithymia and adverse life experiences (see chapter 3 and 4), it was proposed that the existing literature may assist in developing a narrative experience questionnaire. Furthermore, due to the established connection between emotion and criminal accounts, the 10 elements of alexithymia identified by the PAQ can be employed in tandem with a narrative experience questionnaire, to create narratives of alexithymia in both clinical and non-clinical populations. Examining the narratives associated with alexithymia may provide useful insights into; who is most at risk, what environmental aspects may exacerbate it, and enable the identification of more effective treatment pathways.

5.1.1 Aims and Objectives

To date, no research has examined the 10 PAQ components of alexithymia in conjunction with unique life experiences. Therefore, the current chapter sought to explore how alexithymia can be differentiated using a narrative questionnaire alongside the PAQ. To achieve this, multidimensional scaling (MDS) was employed in the form of a smallest space analysis (SSA) to compare data across a non-clinical and clinical population (Borg & Lingo, 2012). This provided a visualisation of alexithymia narratives that arise across both cohorts. The rationale for this derives from the conflicting differences observed across clinical and nonclinical samples. Comparing the two populations should assist in the

identification of those narratives most “at risk” of being affected by alexithymia, and such information should provide useful insights to inform future screening tools. The insights gained from the non-clinical population sample should facilitate a more thorough understanding of those who present with alexithymia in the general population but appear less effected by its symptomology. Finally, the combination of the two samples should then generate a holistic overview of possible “protective” and “non-protective” factors that may support intervention strategies.

5.3 Method

5.3.1 Participants

The non-clinical sample compromised of 82 adults recruited anonymously through opportunity sampling via an expression of interest on social networking sites such as Facebook. The clinical sample of 80 adults were recruited from a local mental health charity via an expression of interest during pre-existing appointments, or within therapy groups. The non-clinical sample consisted of UK residents aged 26-71 years old, with a mean age of 52 years old, while the clinical sample included UK residents aged 26-61 years old, with a mean age of 43 years old. Given prior research indicating a lack of gender difference amongst alexithymic populations, it was agreed that examining alexithymia through the lens of individual experiences, recognising the fluidity of gender, would facilitate a better understanding of the complex interplay between societal and psychological factors in the development and expression of alexithymia. Therefore, gender was not collected.

Participants below the age of 18, and any who were currently prescribed serotonergic medication were excluded. Serotonergic medication was identified in the literature to

overinflate alexithymia scores due to the side effects associated with it (Marchesi et al., 2000). To reduce the number of participants included in the non-clinical sample from falling into a clinical sample, participants within this cohort were excluded if they had accessed mental health services within the last 12 months.

There were no inducements offered for participation in either sample. Full ethical approval was granted from the University of Staffordshire's Ethics committee prior to data collection, and informed consent was gained from all participants. Finally, participants were also informed of their right to withdraw before, during and after data collection, along with the relevant time frames to do so.

5.3.2 Procedure and Materials

The variables for the narrative questionnaire were derived from the scoping review (see chapter 3). To ensure objectivity, a researcher disassociated from the research team, also generated questions from the scoping review. This ensured that the questions generated were directly reflecting the reviewed findings, without bias or additional knowledge of the topic area. These questions were then discussed with all researchers for their inclusion or exclusion within the narrative questionnaire. The final questionnaire consisted of 98 "yes or no" response questions. The questions were structured in this format to remove any ambiguity or requirement for the researchers to interpret any responses. Therefore, a "yes" response equated to "variable present", and a "no" response equated to "variable not present". Some questions also required reverse coding during data analysis to ensure that the response given, accurately reflected the target variable included within the question. The 98 questions reflected seven broad themes that were identified from the scoping review. These included PTSD, trauma and stress; offending, violent and anti-social behaviour; addiction; parenting;

depression, self-harm and suicidality; psychiatric, eating and sleep disorders & treatment engagement. There was a total of 17 questions in the PTSD, trauma and stress theme and example questions included “Have you ever had a serious accident at work, in a car, or somewhere else” and “Do you struggle to unwind or relax”. Within the offending, violent and anti-social behaviour section there were 12 questions including “Have you ever been convicted or charged with a violent offence” or “Have you ever been given a warning, cautioned, convicted or been charged with any offence relating to anti-social behaviour”. Within the addiction theme there was a total of 12 questions that aimed to identify gambling, excessive alcohol use, and excessive use of both illicit and prescribed substances. A total of 15 questions were utilised within the parenting section that assisted in establishing whether participants had been exposed to neglect, over chastisement, physical and emotional abuse. In contrast to this, questions also aimed to illicit positive experiences such as nurture, boundaries, and security. Within the depression, self-harm and suicidality theme there was a total of 11 questions that aimed to identify both diagnosed and undiagnosed depression, suicidal tendencies, and history of self-harm. The psychiatric, eating and sleep disorder was the longest section consisting of 25 questions that aimed to identify any relevant co-morbid conditions both within the participant, and their immediate family. The concluding section consisted of 5 questions aimed to understand their past or current engagement with therapeutic services, or their confidence in accessing such support if required. Such questions were included following recommendations that such information may facilitate more effective treatment pathways (Davis et al., 2023). Therefore, it would be useful to understand which narratives, if any, were associated with poor treatment engagement.

The questions were compiled into an online survey which also included the questions from the Perth Alexithymia Questionnaire (PAQ), a 24-item, 7-point Likert scale used to measure

Alexithymia. The PAQ created by Preece et al. (2018) is a 24-item 7-point Likert scale to measure Alexithymia. It has a factor structure consistent with its theoretical basis; separately measuring all components of the construct across negative and positive emotions. In addition to the factor structure the original authors screened the PAQ for internal consistency reliability, concurrent validity, and discriminant validity, concluding that the PAQ has good overall validity and reliability. Example items within the PAQ included "When I'm feeling bad, I can't tell whether I'm sad, angry, or scared", "When something good happens, it's hard for me to put into words how I'm feeling" or "I prefer to focus on things I can actually see or touch, rather than my emotions". Most participants completed the survey online, however, due to logistics within the clinical sample, some paper copies were made available to document responses. Participants within the clinical sample were also afforded the opportunity to complete their survey on their own, or with a keyworker just before a therapy session was due to be undertaken. This ensured that they had the opportunity to gain support after completion of the questionnaire should they wish to.

5.3.3 Analysis

The data in the study was analysed using smallest space analysis (SSA) (Lingoes, 1973). The benefits of using smallest space analysis (SSA) include the ability to uncover complex relationships between variables which are not easily discernible through traditional methods (Gelman & Hill, 2006). Additionally, SSA is useful for uncovering patterns in data that have multiple levels of complexity (Shye et al., 1994). The smallest space analysis (SSA) works by calculating and ranking the correlations between each item explored and presents them in an association matrix. This matrix is then used to create a visual representation of the data, with each point characterising the variables explored (Guttman, 1968). For example, in the current study it sought to determine whether "difficulty identifying negative feelings" is associated

with childhood physical abuse. The distance and correlation between these points are compared repeatedly to calculate the rank order, with a closer rank order indicating a healthier visual representation to the original data matrix. The SSA was used to examine the co-occurrence of the variables from the data, testing the hypothesis that those characteristics could be divided into themes. Jaccard's coefficient was used to measure the proportion of co-occurrences between two variables (Ioannou & Debowska, 2014; Synnott et al., 2017). The more frequently the variables co-occurred, the closer the points are observed together in the SSA. The lower the association between variables, the further the distance.

Facet Theory (Shye, 1978) provides a means to probe further into the variables that occupy the same region. This enables hypothesising of the relationship between the elements, allowing for a more systematic and comprehensive investigation. Variables within the same 'facet' will likely be more closely correlated and appear close in the SSA visualisation; in contrast, those that are not in the same group will be in different areas of the multi-dimensional space. This principle is known as the 'regional hypothesis', where facets related to the same theme will be situated within the same region, while those further away from the boundary will be distinct. Furthermore, boundary lines can be added to the region to better delineate the respective facets. Regions can then be identified in the space and labelled, via thematic structures (Youngs & Canter, 2012), with similar themes expected to be found in the same region. Finally, the coefficient of alienation quantifies how well co-occurrences in the matrix match the spatial representation of points on the SSA plot.

5.4 Results

5.4.1 Non-Clinical Sample

Frequency statistics were used to analyse the data surrounding the number of individuals reporting symptoms of Alexithymia within the non-clinical data set. The results can be observed in table 5.1.

Table 5.1 *The frequency of Alexithymia symptoms reported across the non-clinical data based on the Perth Alexithymia Questionnaire*

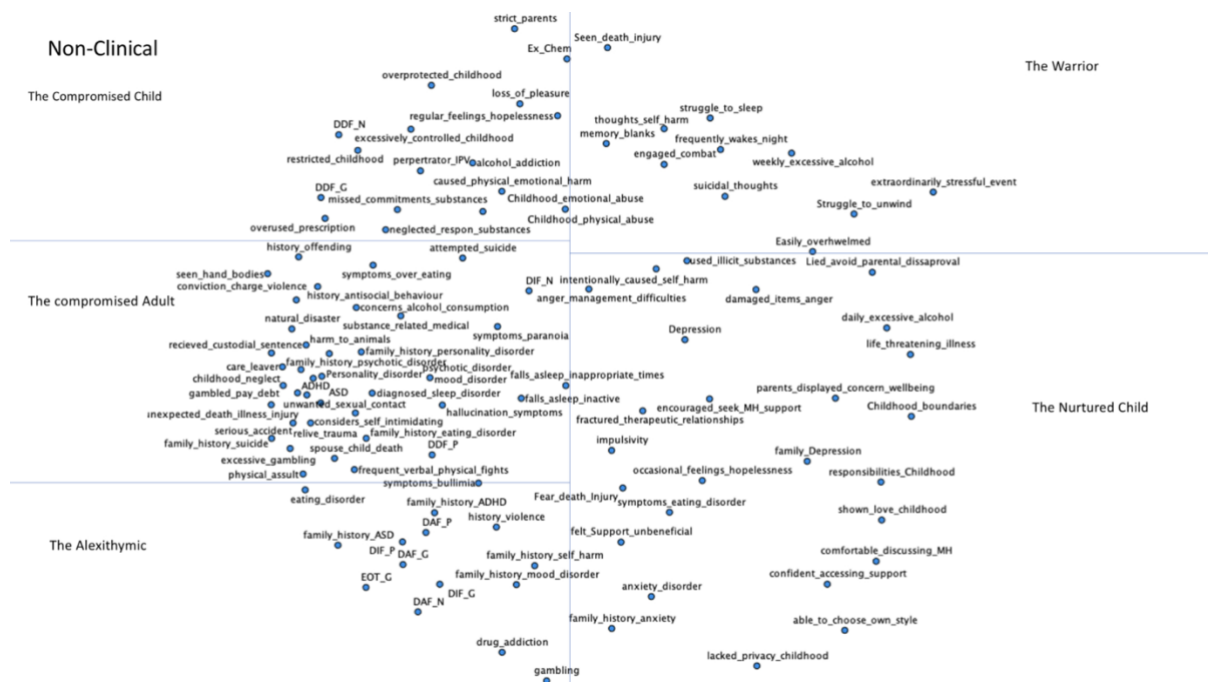
Alexithymia component	Observed	Not Observed
DIF-N	22	60
DIF-P	14	68
DDF-N	22	60
DDF-P	12	70
EOT-G	17	65
DIF-G	19	63
DDF-G	17	65
DAF-N	21	61
DAF-P	15	67
DAF-G	16	66

Note. The percentage of Alexithymia symptoms present within the non-clinical data set ranges from 14.63 % to 26.83 %.

The SSA analysis was performed on all the data from the non-clinical sample collectively (N=82). The stress test used for assessing “goodness of fit” within SSA is, the Tuckers Congruence of Coefficient (TCC) and several cut off values have been proposed ranging

from 0.80 to 0.95 (Lorenzo-Seva & Ten Berge, 2006). Research appears to suggest that the lower the TCC, the less congruence across the data. A cut off of 0.95 is stated to be more appropriate, particularly for data sets that include a large number of variables (Lovik et al., 2020). The TCC for the non-clinical analysis was 0.95 deeming the data to be a “good fit”. Although goodness of fit was considered, Borg and Lingoies (1987) argue that there is no straightforward way to completely understand how good or bad the fit is within multi-dimensional scaling as it is reliant upon a combination of the number of variables, and the logical strength of interpretation. For the purpose of the current study, the goodness of fit is reinforced by the thematic underpinnings. A thematic examination of the plot revealed five distinct themes across the data set (Figure 5.1).

Figure 5.1 *The SSA plot displaying the themes found within the non-clinical data*



Note. The Alexithymia components are only observable within The Compromised Child, The Compromised Adult and The Alexithymic narrative.

5.4.2 Narratives within the Non-Clinical Sample

Due to the number of variables included within the current study, the narratives were analysed holistically when similarities between the variables were thematically identified. However, when analysing the results of a SSA, it is important to consider that each participant sample will contain unique traits and characteristics. Not all the variables within the shared common space will share the same characteristics. However, each common space should reveal an overarching theme allowing for a Narrative to be identified (Youngs & Canter, 2012). In the non-clinical sample, each theme effectively discerns an overarching Narrative and a total of five narratives were identified. There were 17 variables observed within The Compromised Child, 39 within The Compromised Adult, 26 within the Nurtured child, 11 within The Warrior and 15 found within The Alexithymic narrative.

5.4.3 The Clinical Sample

Frequency statistics were used to analyse the data surrounding the number of individuals reporting symptoms of alexithymia within the clinical data set. The results can be observed in table 5.2.

Table 5.2 *The frequency of Alexithymia symptoms reported across the clinical data based on the Perth Alexithymia Questionnaire*

Alexithymia component	observed	not observed
DIF-N	74	6
DIF-P	50	30
DDF-N	69	11
DDF-P	49	31
EOT-G	54	26
DIF-G	65	15
DDF-G	54	26
DAF-N	71	9
DAF-P	52	28
DAF-G	59	21

Note. The percentage of Alexithymia symptoms present within the data set ranges from 62.5 % to 92.5 %.

The SSA analysis was performed on all the data from the clinical sample collectively (N=80). Similar to the non-clinical data, the TCC for the clinical analysis was 0.95 deeming the data to be a “good fit” and this was reinforced by the thematic underpinnings. A thematic examination of the plot revealed four of the same distinct themes across the data set that had been identified within the non-clinical data (Figure 5.2). However, “The Nurtured Child” theme was not found.

Figure 5.2 *The SSA plot displaying the themes found within the clinical data*



Note. The Alexithymia components are now only observable within The Alexithymic Narrative.

5.4.4 Narratives within the Clinical Sample

Four narratives were visible within the clinical sample containing a total of 11 variables observed within The Compromised Child, 23 within The Compromised Adult, 38 within The Warrior and 36 found within The Alexithymia narrative. The narratives were analysed holistically when similarities between the variables were thematically identified. In conjunction with the non-clinical sample, each theme within the clinical sample effectively discerned an overarching Narrative.

4.4.5 Combined Data

The data from the clinical and non-clinical participant sample was combined to supplement an understanding of the data holistically. Frequency statistics were used to analyse the number of individuals reporting alexithymia across both data sets. The results are observable in table 5.3.

Table 5.3 *The frequency of Alexithymia symptoms reported across the combined data based on the Perth Alexithymia Questionnaire*

Alexithymia component	observed	not observed
DIF-N	96	66
DIF-P	64	98
DDF-N	91	71
DDF-P	61	101
EOT-G	71	91
DIF-G	84	78
DDF-G	71	91
DAF-N	92	70
DAF-P	67	95
DAF-G	75	87

Note. The percentage of Alexithymia symptoms present within the entire data set ranges from 37.65 % to 59.26 %.

The SSA analysis was performed on the combined data (N=162) to determine which Narratives are the most influential across both clinical and non-clinical settings. This aspect of the analysis aimed to fulfil the final aim for the current study, providing theoretical

underpinnings to aid future treatment pathways. The TCC for the combined data was 0.95 deeming the data to be a “good fit”, and again the findings were reinforced by the thematic underpinnings. An examination of the plot revealed that the 5 distinct themes found in the non-clinical sample are the most significant when the data is considered holistically (Figure 5.3). The reliability of the identified themes was evaluated by analysing the variables within each theme to determine any inherent dimensions. Using Cronbach's alpha, the consistency of each scale in representing its corresponding theme was confirmed, showing a strong correlation among the variables within each theme (Table 5.4).

Figure 5.3 The SSA plot displaying the themes found within all data



Table 5.4 Scales of Clinical Narrative Experience Themes

Theme	Number of Items	Cronbach's α
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The Compromised Child	18	0.87
The Compromised Adult	35	0.96
The Nurtured Child	16	0.89
The Warrior	12	0.88
The Alexithymic	27	0.95

5.4.6 Narratives within the Combined Data Set

Within the combined data set, there was a total of 18 variables observed within The Compromised Child, 35 within The Compromised Adult, 16 within the Nurtured Child, 12 within The Warrior and 27 found within The Alexithymic narrative. The narratives were analysed holistically when similarities between the variables were thematically identified. In conjunction with the non-clinical and clinical sample, each theme within the combined data set effectively discerned an overarching narrative.

5.4.7 Testing the Framework

The SSA sort the narratives of alexithymia into five distinct themes but does not categorise participants. To assess the thematic distribution, each of the 162 cases was scrutinised to see if it aligned with a specific theme based on the participant's narrative and traits of alexithymia. Cases were scored with percentages for each theme; The Compromised Child, The Compromised Adult, The Nurtured Child, The Warrior, and The Alexithymic to account

for the varying number of variables across themes. A case was designated under a theme if its percentage for that theme was greater than or nearly the sum of the percentages for the other four. This approach follows methods used in prior studies (Ioannou, 2016; Canter & Fritzon, 1998; Salfati, 2000). If a case showed an equal percentage in two themes, it was considered a hybrid. Cases were not classified if they held less than a third of the theme's variables or if variables were evenly spread across more than two themes, or if no theme was predominant. By employing such criteria, all cases could be classified as either pure type 90.7% (n=147) or hybrid 9.2% (n=15). The most frequent pure type was The Compromised Adult. This was followed by The Compromised Child, The Nurtured Child, The Alexithymic and finally The Warrior , with two hybrid types following this (Table 4).

Table 5.5 *Number of cases assigned to each Narrative*

Theme	Number of Items	Percentage
The Compromised Child	34	20.99
The Compromised Adult	40	24.69
The Nurtured Child	27	16.67
The Warrior	20	12.35
The Alexithymic	26	16.05
The Compromised Child -The Alexithymic	6	3.70
The Compromised Adult – The Alexithymic	9	5.55

5.4.8 Discussion of the Narratives within the Data

5.4.8.1 The Compromised Child

The Compromised Child narrative was established due to the co-occurring variables associated with negative childhood experiences found in both the non-clinical and clinical sample. These variables included excessive control in early childhood, an overprotected childhood, as well as emotional and physical abuse. However, the strength of co-occurrence appears to be stronger within the non-clinical sample in comparison to the clinical sample. An explanation for this may be found in assertions that alexithymia must exist prior to any trauma for the trauma to become clinically significant. Essentially, the trauma may not necessarily induce alexithymia, but rather it may elevate some areas of it. In the current study, this was evident as two components of alexithymia; “difficulty defining negative feelings” and “difficulty defining general feelings”, which were only present in the non-clinical sample. This supports Elzinga et al.’s (2002) postulation that those who experience trauma without co-morbid alexithymia, may go on to lead seemingly normal lives and reduce the risk of them presenting in clinical populations. For example, if a person has pre-existing Alexithymia, but is exposed to adverse childhood experiences, these experiences become highly relevant when evaluated against alexithymia symptomology. On the other hand, a person without pre-existing alexithymia may still experience adverse childhood experiences, but these experiences are of lesser importance in relation to their alexithymic traits. Nevertheless, The Compromised Child narrative remains important to acknowledge as it implies that anyone who fits within this overarching narrative may benefit from trauma informed interventions. Such interventions may be complimented by the incorporation of strategies aimed to develop their ability to define their feelings more effectively.

5.4.8.2 The Compromised Adult

The Compromised Adult narrative appears to include content characteristics known to disrupt "typical" development. Evidence of this can be seen in the increased levels of alcohol consumption found within the non-clinical, clinical, and combined data sets. Excessive alcohol consumption is associated with emotional processing difficulties, poor impulse control, attention deficits, and delinquent behaviour (Attwood & Munafo, 2014; Sullivan et al., 2016; Miller et al., 2016). This correlation is supported by the surrounding co-occurring variables including addiction, violence, later life trauma, and co-morbid mental health conditions. Such variables portray an overarching narrative of an individual who has experienced adversity in their adult life. When comparing the non-clinical and clinical findings, there appeared to be no Alexithymic components found within this narrative in the clinical data. However, in the non-clinical data, such experiences were associated with "difficulty identifying negative feelings" and "difficulty defining positive feelings".

Consequently, the results may be likened to those discussed within The Compromised Child narrative, indicating that a disruption in typical development within adulthood may induce some elements of alexithymia, but that these elements would not necessarily lead to a person presenting within a clinical setting. Regardless, The Compromised Adult narrative shows promising prospects for facilitating more effective treatment pathways. For example, if an individual is identified as fitting within this narrative, they may benefit from therapeutic input that assists them in identifying negative feelings and defining positive feelings. It is likely that these emotional deficits will impede upon their ability to access standardised therapy effectively. Such assumptions are supported by Saladin et al. (2012) who identified that difficulties in identifying feelings and difficulties describing feelings contributes towards fractured relationships with key workers and therapists in treatment services. It is plausible to assume that if clinicians are not given guidance surrounding the likely characteristics

associated with this narrative, they may expect such individuals to be capable of reflecting upon their own feelings and emotions during therapeutic interventions. However, the findings of the current study would suggest that a preliminary intervention may need to be undertaken to support the individual to successfully achieve this prior to any standard therapeutic intervention taking place.

5.4.8.3 The Warrior

The warrior narrative has been found to be underpinned by content characteristics associated with “stereotypical” trauma, such as those commonly associated with Post Traumatic Stress Disorder (PTSD) (Armstrong & Olatunji, 2009). Variables found across all three data sets were indicative of a “soldier” or “warrior” who had experienced an exceptionally stressful event, such as observing death, significant injury, or engaging in combat. These variables also included stereotypical PTSD symptoms such as struggling to relax, becoming easily overwhelmed, sleeping difficulties, memory blanks, thoughts of self-harm and suicidal ideation. When focusing on the clinical sample, these variables became intertwined with variables associated with the Compromise Adult narrative, likely indicating that the more adversity a person experiences, the less likely the variables can differentiate their individual narrative experiences from other forms of trauma or environmental factors. Notably, across all three data sets there were no elements of alexithymia found within The Warrior narrative. This further supports the literature that there are distinguished differences between PTSD and alexithymia, effecting different areas of the brain (Frewen, 2006). Furthermore, it supports assumptions that those with isolated PTSD appear more able to access treatment effectively, in comparison to those with co-morbid alexithymia (Davis, 2022). Therefore, it is likely that those who fall solely within this narrative still possess the tools for emotional regulation,

enabling them to access support more effectively, thus reducing the likelihood of them experiencing pro-longed negative life outcomes.

5.4.8.4 The Nurtured Child

The Nurtured Child narrative was found across two out of the three data sets (non-clinical & combined data) and was named due to the co-occurrence of positive childhood variables such as boundaries, love, nurture, and responsibilities. Furthermore, this narrative was associated with better treatment outcomes, including the confidence to access support, comfort in discussing mental health concerns, and encouragement to seek professional help. While it is important to acknowledge the presence of negative variables within this narrative, the majority of these variables appear to be associated with lower-level mental health concerns, such as occasional feelings of hopelessness and family histories of depression and anxiety. Given the extensive research regarding the connection between positive parenting and positive life experiences (Lakind & Atkinson, 2018; Wiggins et al., 2009; Oostdam & Hooge, 2013), it is not surprising that this narrative is linked to positive treatment outcomes. The Nurtured Child narrative showed no evidence of alexithymia, implying that those who fall mainly within this narrative are less likely to be affected by alexithymia and more likely to have positive life outcomes. However, it is important to note that although a Nurtured Child narrative was not present within the Clinical data set, this does not necessarily mean that participants within this cohort did not have positive childhoods. Rather, it suggests that such experiences may fail to act as a protective factor the more adversity a person experiences, thus making its relationship to alexithymia less significant. Nevertheless, if such narrative were to be used to guide treatment pathways, any individual who predominantly sat within this category, would likely be receptive to standardised treatment for lower-level mental health concerns.

5.4.8.5 The Alexithymic

The Alexithymic narrative was aptly named, due to the majority of alexithymia variables found in this narrative across all three data sets. Comparing the SSA outputs, this narrative revealed less about the alexithymic traits but instead provided more effective insight into the relevance of negative life variables. Within the non-clinical data, fewer environmental factors were associated with alexithymic components, and those that did occur were expected, such as the presence of an Autistic Spectrum Condition. Individuals who are on the Autistic spectrum are significantly more likely to experience symptoms of alexithymia, with research indicating that co-morbid alexithymia is "common", but not "universal" in this population (Kinnaird et al., 2019). Similarly, within the non-clinical data the presence of the "drug addiction" variable was not surprising. Previous research has already identified that those with alexithymia often use substances to cope with negative affect, increase positive affect and increase arousal (Hamidi et al., 2010). Consequently, whilst attempts were made to eliminate clinical participants from the non-clinical sample, some overlap was inevitable, and it is possible that such associations are evident from this overlap. What is more noteworthy, is the increase of environmental variables within the clinical sample that are less able to be differentiated. This lack of differentiation gives better insight into the Alexithymic individual. For instance, the clinical data output showed evidence of protective factors, such as parental concern for wellbeing in early childhood, as well as variables associated with violence, trauma, addiction, and mental health concerns. These findings suggest that alexithymia may be a genetic predisposition that is exacerbated by negative life experiences, leading to a higher likelihood of presentation within clinical settings. In essence, the SSA provides evidence to support that some individuals within the non-clinical sample do have elevated levels of "full spectrum" alexithymia, but their Alexithymic traits have not affected them to

the extent that they require clinical intervention. Within the clinical sample it appears that a combination of alexithymia, alongside trauma, a history of violence, addiction, and mental health concerns places individuals at higher risk of needing clinical support in later life. Much like the previous findings, these theoretical assumptions may be crucial for future treatment pathways as it suggests that a person can have numerous Alexithymic traits but not necessarily need therapeutic support. Yet those that do have it, are at risk of clinical intervention in the future should they experience additional adversity.

5.5 Discussion

The aim of the current research was to examine narratives associated with alexithymia to provide useful insights surrounding who is most at risk, what environmental aspects may exacerbate it and facilitate the creation of more effective treatment pathways. The current findings have only partially met those aims. Five narratives associated with alexithymia were identified, The Compromised Child, The Compromised Adult, The Nurtured Child, The Warrior and The alexithymic. However, only three of those narratives appear relevant to Alexithymia research; these include The Compromised Child, The Compromised Adult and The alexithymic.

The current study initially contained 98 variables that were believed to be, based upon previous literature, associated with alexithymia. Forty-five of those variables, across the three narratives identified, appear influential to the alexithymic individual. As previously discussed, when analysing the results of a Smallest Space Analysis, it is important to consider that each participant sample will contain unique traits and characteristics. Therefore, studies of this nature aim to consider those variables that best fit within “the regional hypothesis,”

meaning that their correlation to each other makes plausible sense and where possible is reinforced by prior research (Youngs & Canter, 2012).

It would be idealistic to assume that once such narratives are identified, every individual will fit neatly into one narrative, and, that this will enable effective differentiation to support future treatment pathways. In reality, this is not always the case, and many studies of this nature acknowledge that individuals will often express the presence of variables that fit within multiple narratives (Ioannou & Debowska, 2014; Synnott et al., 2017; Youngs & Canter, 2012; Goodlad et al., 2019). Past studies have also revealed that once such categories are identified, an individual will usually report more variables within one main narrative, thus enabling a clearer treatment pathway that is substantiated by theory (Ioannou & Debowska, 2014; Synnott et al., 2017; Youngs & Canter, 2012; Goodlad et al., 2019).

The current study has provided early theoretical foundations for treatment pathways, which may be further developed to inform screening tools incorporating Alexithymic components alongside the narratives identified. This could then be tested through trialling the tool within a pilot study, to understand its abilities in discerning individuals into an overarching narrative and assess its effectiveness in aiding clinicians to generate better care plans, build relationships, and facilitate treatment outcomes. To achieve this, the remaining 48 variables now need to be incorporated into a factor analysis, which should identify the variables that are highly correlated and group them within the same factor or sub-scale. Moreover, such analysis may assist in discarding any “outlier” variables creating a firmer differentiation between the narratives identified in the current study.

When considering those most at risk, the current study has demonstrated that exposure to adverse childhood experiences may increase the likelihood of an individual to experience difficulties in defining negative feelings. Furthermore, individuals with compromised development in adulthood are more likely to experience difficulties in both defining general emotions as well as identifying negative feelings. These findings provide a basis for future research on alexithymia to consider it as a “spectrum” condition, in which those who fall within a Compromised Child or Compromised Adult narrative may experience elements of the condition, but not the full spectrum of emotional deficits. Moreover, those that fall within the Alexithymic narrative, will likely be individuals that not only sit high within the alexithymia spectrum, but they may also be more at risk of needing clinical intervention, particularly if they have experienced numerous adverse life experiences. However, past literature suggests that if the components of alexithymia can be effectively addressed, any trauma or adversity an individual has experienced, may be mentally processed, and overcome more effectively (Lumley et al., 2007). These findings are significant, in that they can now be used to prompt clinician awareness and promote more effective evidenced based interventions.

5.5.1 Limitations and Conclusions

Overall, the current study provides evidence to suggest significant benefits of the narrative approach in understanding alexithymia. However, it is not without its limitations. Replication of this study is difficult due to the individual characteristics of the participant sample. Yet, any future replication should still be able to thematically identify similar overarching narratives to those found within the current study. Furthermore, demographic characteristics such as age, religion, or ethnic background were not collected, making it difficult to

determine whether there are differences within the data across cultures. Future studies may wish to address this gap in the literature to enhance the current findings.

Additionally, the Nurtured Child narrative, or more importantly its lack of presence within the clinical data, requires further exploration. Explanations for this may include positive childhood experiences ceasing to be a protective factor within clinical populations, or that negative childhood experiences play a more significant role than first thought in the development of alexithymia. Therefore, it could be suggested that “difficulty defining negative feelings” and “difficulty defining general feelings” acts as a precursor for the development of alexithymia over time. For example, if an individual has a negative childhood experience, coupled with a compromised development in adulthood then the combination of alexithymia variables across the two narratives may be viewed as cumulative, increasing the likelihood of full spectrum secondary “alexithymia”. However, this is somewhat less plausible when considering the presence of The Warrior narrative, as it would be expected that some evidence of alexithymia would be visible within this category to reinforce this assumption. Ultimately, it appears more likely to conclude that, in contrast to previous literature, alexithymia is a genetic predisposition that is exacerbated by the presence of negative environmental factors but is not induced by them.

Chapter 6. An Exploratory Factor Analysis and Regression Approach to Applying the Theoretical Underpinnings of Alexithymia Narratives to Psychological Practise

6.1 Chapter Overview

This chapter explores the application of Binary Logistic Regression and Exploratory Factor Analysis (EFA) following the initial findings from Smallest Space Analysis (SSA). Together, Binary Logistic Regression and EFA embodied a mixed-methods approach, harmonising diverse research methodologies to provide a richer understanding and more effective screening for alexithymia within co-morbid mental health populations. This chapter illustrates a commitment to rigorous research standards while maintaining a balance between capturing the depth of individual experiences and ensuring their broader applicability in psychological assessments and interventions. The integration of these methods provided a robust empirical foundation for the subsequent development of a new screening tool, optimising its relevance and effectiveness in clinical practice.

6.2 Introduction

Psychological research plays a crucial role in understanding mental health, cognitive processes, and human behaviour. The findings of such research can then be applied in practice to inform clinical processes, policies, interventions, and societal wellbeing (Levitt et al., 2017). Powell et al. (2008) describes three waves associated with the development of research in the field of psychology. The first is identified as the wave of “traditional science” whereby researchers adopted the notion that social science should seek to carry out rigorous

testing utilising methods commonly adopted by physicists. This resulted in much emphasis being placed upon quantitative research methods and led to the widespread belief that such methods were superior to other forms of data collection and analysis. The second wave evolved from the criticisms adopted by social researchers, who suggested that the subjective nature of human behaviour meant that quantitative research could not accurately underpin the complexities associated with human psychology. This shift in thought processes led to many social scientists adopting qualitative approaches to study human behaviour and psychological phenomenon. Whilst this led to the adoption of both qualitative and quantitative research methods, the two approaches rarely co-existed and quantitative research methods continued to dominate the field (Powell et al., 2008). The third wave is described as the “mixed methods” movement, where recommendations suggest that research is likely to be superior when combining qualitative and quantitative approaches (Powell et al., 2008; Venkatesh, et al., 2013).

Despite such recommendations, systematic reviews of the literature have continued to evidence discrepancies in the number of studies utilising a mixed method approach. One study, which reviewed four major school psychology journals between 2001 to 2005, found that only 20% of articles published in one of the journals purported using a mixed methods design. The other three journals reported much lower percentages ranging from 10.86% to 16.67% (Powell et al., 2008). Although there is an acknowledgement that mixed method designs are on the increase, quantitative research methods continue to command the discipline of psychology.

As previously highlighted, it is often reported that some of the difficulties associated with quantitative research are that it fails to address the complexity of human behaviour, lacks

contextual understanding and fails to capture subjective experience (Smedslund, 2012; Morse, 2015; Jarden, et al., 2017; Podsakoff et al., 2003). It is crucial therefore, that any psychological research undertaken applies a theoretical basis to their study to assist in strengthening the combination of both quantitative and qualitative research methods (Demick, 2000). Historically, the combination of research methods is deemed effective when qualitative analysis is used as an exploratory exercise and quantitative methods are used as a confirmatory analysis (Foster, 2023). This assists us? to understand the unique experiences of individuals but also facilitates a broader understanding surrounding how those experiences may be replicated amongst other members of society by identifying any commonalities which may assist to inform clinical practise. Narrative theory compliments this approach, as it is suggested that narrative theory retains the complexity of individual differences, whilst also studying those complexities against multiple interactions of other individuals and cultures (Kirkman, 2002).

Chapter 5 provides evidence as to how narrative theory can assist in documenting the individual experiences of “subjects”, viewing them as complex human beings, whilst also analysing how those experiences share commonalities with other “subjects” from a pre-determined population sample. When applying such findings to facilitate interventions within clinical practise however, it is prudent to utilise the data and analyse it from a quantitative perspective; thus, combining the exploratory findings with confirmatory analysis thereby promoting the rigour of psychological study as both qualitative and quantitative research methods are combined.

Psychological research, in addition to improving understanding, should stive to ensure its findings will contribute in some way to developing new and innovative ways to address

complex psychological problems. The development of new screening tools, which are essential in identification and treatment processes, are an example. Screening tools already exist for a wide variety of psychological concerns such as depression, anxiety, psychopathology and even alexithymia, however, such screening tools often fail to incorporate the narrative stories or individual experiences of the subjects (Barak & English, 2002). This is despite existing psychological research already confirming that differing experiences of individuals will affect them in different ways (Turner & Lloyd, 1995). For example, the current body of evidence available surrounding trauma, implies the different types of trauma can predict differing psychological problems ranging from temporary psychological discomfort, to less severe psychological conditions such as depression and anxiety; to more severe psychiatric conditions such as, PTSD and Functional Neurological Disorders (Turner & Lloyd, 1995).

This supports an argument for screening tools, if possible, to incorporate information to inform clinicians of the possible narratives of those they are treating. This is not a new concept, as many disciplines in psychology already adopt the approach that treatment is less effective for certain psychological or psychiatric conditions if there is underlining co-morbidity exasperating the psychological distress (Kroenke, 2023).

Indeed, by the time someone begins to access tier two mental health services there may come a point where they are able to interact with a qualified clinician to experience a combination of interviews and assessment tools to identify the type of support needed for their individual needs based on a holistic approach. However, with the ever-increasing pressure on mental health services, coupled with extensive waiting lists and tier two services more frequently being conducted by less qualified individuals in mental health, more attention needs to be

focused on the benefits of early intervention (Hogan & Goldman, 2021). Consequently, any screening tool which seeks to not only identify at risk individuals, but facilitate an efficient, quick and more holistic understanding of them is worth developing. This is particularly pertinent for alexithymia, considering the findings discussed in Chapter 1...

“given the nature of therapeutic interventions often requires a person to reflect upon their feelings and emotions, such findings.... are concerning given that this renders treatment services inaccessible to Individuals with alexithymia”.

Consequently, identifying alexithymia together with the likely narrative experience of the individual, may not only empower the individual's self-understanding, but may enable tier one practitioners to commence work on their basic emotional awareness and acknowledgement of how their unique life experiences could relate to the deficits in their emotional processing. Additionally, this can assist practitioners to identify those likely to need referral to higher level tier services.

6.2.1 The Current Study

Consequently, the aim of this study is to undertake further quantitative analysis on the data obtained from the study in chapter 5, to identify whether such analysis can confirm the findings identified in the study but also support the benefits of using a mixed method approach to inform clinical practise. If the findings of the quantitative analysis support the findings of the original study, the data and its findings can then be utilised in the form of an Exploratory Factor Analysis (EFA) to form the basis of a new screening tool to address the discrepancies in the current literature. It is hypothesised, based on the evidence available, that the quantitative analysis will support the findings of the study in chapter 5. This is due to the

extensive body of literature that suggests unique life experiences such as trauma, can often predict later psychological distress. However, it is acknowledged that given the unique characteristics of the population sample, there is some expectation for slight discrepancies in the data. For example, it was acknowledged in the previous chapter that one limitation of following a narrative approach is that some participants may display characteristics which overlap onto more than one narrative. The challenge is that the SSA may present characteristics as being associated with a certain narrative, however, the characteristic strength for predicting elements of alexithymia may likely be lower than that of other characteristics, due to the number of individuals reporting such events being relatively low within the population sample.

6.2.2 Aims

1. To explore the data obtained from the SSA from a quantitative perspective, utilising ten Binary Logistic regressions (one for each component of alexithymia) to increase the reliability and validity of the theoretical underpinnings identified in the previous study.
2. To combine the results of the SSA and Binary Logistic regression to inform an Exploratory Factor Analysis (EFA).
3. To conduct an EFA. EFA will be utilised to ensure construct validity of a new screening tool. It is expected that this will assist to identify any relationship between the remaining variables from aim 1 and 2, grouping them together within the same factor/subscale. Consequently, identifying any “outlier” questions, allowing them to be removed, facilitating the smallest set of meaningful factors that can then be incorporated into the screening tool.

6.3 Method

6.3.1 Method and Procedure

The 98 response variables from 162 participants (see section 5.3.1 for details), gathered from the previous study were inputted into SPSS and ten separate binominal logistic regressions were performed. The responses to the narrative questionnaire were analysed against the responses to the PAQ to identify if any of the life experiences reported by participants predicted the responses to the 10 differing components of alexithymia. The narrative questions covered various aspects of possible life experiences, such as trauma, offending history, addiction, parenting experiences, mental health, and treatment engagement. In contrast, the data pertaining the PAQ only analysed those responses that scored “high” in the differing components of alexithymia across the ten areas. Those who scored low or average on the differing components of alexithymia were not deemed as meeting the criteria for that alexithymic element. This was to ensure that the life experiences were being analysed as possible predictor variables only against clear indications of alexithymia symptomology. Consequently, it is likely that the findings are an under representative of the true impact of life experiences on alexithymia. However, by including those that scored average or low in alexithymia components this may have overinflated the results. As such it was deemed that overinflation of the results may pose more limitations than under inflation for the purposes of the current research. Finally, once the results had been analysed, the data pertaining to those variables that were deemed associated with alexithymia from both the previous study and the current study were utilised within SPSS to undertake an EFA. This was done to determine the smallest possible set of meaningful variables to inform a newly developed screening tool.

6.3 Results

6.3.1 Binary Logistic Regression

Ten Binominal Logistic Regressions were performed using a forward stepwise method to determine which, if any, of the 98 independent variables used in the original study predicted the 10 components of alexithymia. Cut off scores were used to convert participants scores across the 10 components of alexithymia into binary outcome variables.

6.3.1.1 Difficulty Identifying Negative Feelings

The first logistic regression analysed the 98 independent variables against the predictor variable “Difficulty Identifying Negative Feelings” (DIF-N). The Nagelkerke R-Square value indicated a strong relationship (.700), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 11 of the 98 variables in predicting DIF-N.

Table 6.1 *The independent variables found to predict DIF-N*

Variables	Statistical Justifications
Natural disaster	$\beta = 0.51, SE = 1.193, p = .012$
Life threatening illness	$\beta = 8.38, SE = .789, p = .007$
Unwanted sexual contact	$\beta = 5.63, SE = .650, p = .008$
Perp IPV	$\beta = 0.13, SE = .668, p = .003$
Used illicit substances	$\beta = 28.6, SE = 1.17, p = .004$
Missed commitments substances	$\beta = .118, SE = .662, p = .001$
Gambled pay debt	$\beta = .086, SE = .614, p < .001$

Suicidal thoughts	$\beta = .159, SE = .668, p = .006$
Regular feelings hopelessness	$\beta = .289, SE = .570, p = .030$
ADHD	$\beta = .068, SE = .791, p < .001$
Family psychotic disorder	$\beta = 28.27, SE = .858, p < .001$

6.3.1.2 Difficulty Identifying Positive Feelings

The second logistic regression analysed the 98 independent variables against the predictor variable “Difficulty Identifying Positive Feelings” (DIF-P). The Nagelkerke R-Square value indicated a strong relationship (.623), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 10 of the 98 variables in predicting DIF-P.

Table 6.2 *The independent variables found to predict DIF-P*

Variables	Statistical Justifications
Considers self-intimidating	$\beta = .046, SE = .885, p < .001$
Drug addiction	$\beta = .260, SE = .559, p = .016$
Missed commitments substances	$\beta = .161, SE = .593, p = .002$
Responsibilities childhood	$\beta = 5.309, SE = .576, p = .004$
Intentionally caused self-harm	$\beta = 8.84, SE = .699, p = .002$
Psychotic disorder	$\beta = .168, SE = .900, p = .047$
Struggle to sleep	$\beta = .194, SE = .845, p < .052$
Falls asleep inappropriate times	$\beta = .262, SE = .543, p = .014$
Symptoms paranoia	$\beta = 6.23, SE = .690, p = .008$
Exposure Chem	$\beta = 20.30, SE = 1.18, p = .011,$

6.3.1.3 Difficulty Defining Negative Feelings

The third logistic regression analysed the 98 independent variables against the predictor variable “Difficulty Defining Negative Feelings” (DDF-N). The Nagelkerke R-Square value indicated a strong relationship (.631), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 9 of the 98 variables in predicting DDF-N.

Table 6.3 *The independent variables found to predict DDF-N*

Variables	Statistical Justifications
Unwanted sexual contact	$\beta = 8.38, SE = .598, p < .001$
Perp IPV	$\beta = .159, SE = .543, p < .001$
Frequent verbal Physical fights	$\beta = .101, SE = .975, p = .016$
Used illicit substances	$\beta = 36.2, SE = 1.35, p = .008$
Gambled pay debt	$\beta = .191, SE = .498, p < .001$
Thoughts self-harm	$\beta = .207, SE = .629, p = .012$
Family self-harm	$\beta = .324, SE = .591, p = .056$
ADHD	$\beta = .105, SE = .735, p = .002$
Eating disorder	$\beta = 61.44, SE = 1.64, p = .001$

6.3.1.4 Difficulty Defining Positive Feelings

The fourth logistic regression analysed the 98 independent variables against the predictor variable “Difficulty Defining Positive Feelings” (DDF-P). The Nagelkerke R-Square value indicated a strong relationship (.829), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 18 of the 98 variables in predicting DDF-P.

Table 6.4 *The independent variables found to predict DDF-P*

Variables	Statistical Justifications
Seen death Injury	$\beta = 164.05, SE = 1.39, p < .001$
Spouse child death	$\beta = 26.58, SE = 1.22, p = .007$
Life threatening illness	$\beta = 322.05, SE = 1.68, p < .001$
Extraordinarily stressful event	$\beta = .014, SE = 1.29, p = .001$
Custodial sentence	$\beta = .008, SE = 1.82, p = .008$
Considers self-intimidating	$\beta = .022, SE = 1.68, p = .024$
Used illicit substances	$\beta = 12051.93, SE = 14.40, p < .001$
Missed commitments substances	$\beta = .199, SE = .885, p = .068$
Care leaver	$\beta = .143, SE = 1.01, p = .019$
Lied avoid parental disapproval	$\beta = .060, SE = 1.15, p = .015$
Family suicide	$\beta = .005, SE = 1.42, p < .001$
Suicidal thoughts	$\beta = .016, SE = 1.29, p = .001$
Intentionally caused self harm	$\beta = 15.35, SE = 1.27, p = .032$
Family history ADHD	$\beta = .005, SE = 1.88, p = .006$
Family history psychotic disorder	$\beta = 100.75, SE = 1.54, p = .003$
Struggle to sleep	$\beta = .002, SE = 1.86, p = .001$

6.3.1.5 General External Oriented Thinking

The fifth logistic regression analysed the 98 independent variables against the predictor variable “General Externally Oriented Thinking” (EOT-G). The Nagelkerke R-Square value indicated a strong relationship (.542), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 6 of the 98 variables in predicting EOT-G.

Table 6.5 *The independent variables found to predict EOT-G*

Variables	Statistical Justifications
Unwanted sexual contact	$\beta = 5.35, SE = .522, p = .001$
History offending	$\beta = 3.67, SE = .594, p = .029$
Considers self-intimidating	$\beta = .115, SE = .719, p = .003$
Missed commitments substances	$\beta = .173, SE = .457, p < .001$
ADHD	$\beta = .100, SE = .630, p < .001$
Fractured therapeutic relationships	$\beta = .191, SE = .489, p < .001$

6.3.1.6 General Difficulty Identifying Feelings

The sixth logistic regression analysed the 98 independent variables against the predictor variable “General Difficult Identifying Feelings” (DIF-G). The Nagelkerke R-Square value

indicated a strong relationship (.810), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 17 of the 98 variables in predicting DIF-G.

Table 6.6 *The independent variables found to predict DIF-G*

Variables	Statistical Justifications
Exposure chem	$\beta = 71.34, SE = 1.39, p = .001$
Unexpected death illness injury	$\beta = .094, SE = 1.33, p = .009$
Unwanted sexual contact	$\beta = 63.181, SE = .906, p < .001$
Frequent verbal physical fights	$\beta = .024, SE = 1.00, p = .002$
Used illicit substances	$\beta = 102.88, SE = 1.20, p = .029$
Missed commitments substances	$\beta = .159, SE = 2.12, p = .025$
Excessive gambling	$\beta = 11.53, SE = .817, p = .006$
Gambled pay debt	$\beta = .155, SE = .894, p = .027$
Overprotected childhood	$\beta = .014, SE = 1.47, p = .004$
Lied avoid parental disapproval	$\beta = .021, SE = 1.21, p = .002$
Responsibilities childhood	$\beta = 6.98, SE = .983, p < .048$
Occasional feelings hopelessness	$\beta = .018, SE = .956, p < .001$
ADHD	$\beta = .089, SE = 1.67, p = .012$
Eating disorder	$\beta = 457.04, SE = 1.35, p < .001$
Symptoms bulimia	$\beta = 28.49, SE = 1.02, p = .013$
Falls asleep inappropriate times	$\beta = .022, SE = 1.14, p < .001$
Symptoms paranoia	

$$\beta = 22.88, SE = 3.26, p = .006$$

6.3.1.7 General Difficulty Defining Feelings

The seventh logistic regression analysed the 98 independent variables against the predictor variable “General Difficulty Defining Feelings” (DDF-G). The Nagelkerke R-Square value indicated a strong relationship (.542), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 8 of the 98 variables in predicting DDF-G.

Table 6.7 *The independent variables found to predict DDF-G*

Variables	Statistical Justifications
Seen death injury	$\beta = 4.07, SE = .512, p = .006$
Spouse child death	$\beta = 7.15, SE = .669, p = .003$
History AS behaviour	$\beta = .126, SE = .666, p = .002$
Frequent verbal physical fights	$\beta = .241, SE = .679, p = .036$
Gambled pay debt	$\beta = .336, SE = .458, p = .017$
Responsibilities childhood	$\beta = 2.56, SE = .463, p = .042$
Family self-harm	$\beta = .147, SE = .529, p < .001$
Falls asleep inappropriate times	$\beta = .324, SE = .443, p = .011$

6.3.1.8 Difficulty Appraising Negative Feelings

The eighth logistic regression analysed the 98 independent variables against the predictor variable “Difficulty Appraising Negative Feelings” (DAF-N). The Nagelkerke R-Square value indicated a strong relationship (.621), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 6 of the 98 variables in predicting DAF-N.

Table 6.8 *The independent variables found to predict DAF-N*

Variables	Statistical Justifications
Unwanted sexual contact	$\beta = 4.34, SE = .530, p = .006$
Perp IPV	$\beta = .141, SE = .548, p < .001$
Used illicit substances	$\beta = 194, SE = 7831.4, p < .001$
Gambled pay debt	$\beta = .052, SE = .525, p < .001$
Thoughts self-harm	$\beta = .248, SE = .537, p = .009$
Family psychotic disorder	$\beta = 5.76, SE = .761, p = .021$

The ninth logistic regression analysed the 98 independent variables against the predictor variable “Difficulty Appraising Positive Feelings” (DAF-P). The Nagelkerke R-Square value indicated a strong relationship (.585), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 8 of the 98 variables in predicting DAF-P.

Table 6.9 *The independent variables found to predict DAF-N*

Variables	Statistical Justifications
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Overused prescriptions	$\beta = .375, SE = 3.41, p = .065$
Missed commitments substances	$\beta = .279, SE = 5.92, p = .015$
Lied avoid parental disapproval	$\beta = .237, SE = 7.06, p = .008$
Occasional feelings hopelessness	$\beta = .208, SE = 9.25, p = .002$
Psychotic disorder	$\beta = .108, SE = 6.04, p = .014$
Family eating disorder	$\beta = 7.66, SE = 6.54, p = .011$
Eating disorder	$\beta = 28.11, SE = 7.85, p = .005$
Falls asleep inappropriate times	$\beta = .229, SE = 9.60, p = .002$

6.3.1.10 General Difficulty Appraising Feelings

The tenth logistic regression analysed the 98 independent variables against the predictor variable “General Difficulty Appraising Feelings” (DAF-G). The Nagelkerke R-Square value indicated a strong relationship (.743), thus demonstrating the model to be a good fit to the data. The results were statistically significant for 14 of the 98 variables in predicting DAF-G.

Table 6.10 *The independent variables found to predict DAF-G*

Variables	Statistical Justifications
Exposure chem	$\beta = 16.15, SE = 1.08, p = .010$

Used illicit substances	$\beta = 45.09, SE = 1.78, p=.033$
Missed commitments substances	$\beta = .198, SE = 1.78, p=.008$
Gambled pay debt	$\beta = .185, SE = .608, p=.006$
Overprotected childhood	$\beta = .066, SE = 1.00, p=.006$
Responsibilities childhood	$\beta = 24.67, SE = .997, p=.001$
Occasional Feelings hopelessness	$\beta = 24.67, SE = .687, p<.001$
ADHD	$\beta = .160, SE = .801, p=.022$
Family psychotic disorder	$\beta = 13.09, SE = .931, p=.006$
Psychotic disorder	$\beta = .096, SE = 1.19, p=.049$
Eating disorder	$\beta = 326.99, SE = 1.63, p<.001$
Struggle to sleep	$\beta = .124, SE = 1.03, p<.044$
Falls asleep inappropriate times	$\beta = .108, SE = .703, p=.002$
Unwanted sexual contact	$\beta = 7.79, SE = .712, p=.004$

6.3.1.7 Overall

The Binominal Logistic regressions revealed that 43 variables in total predict the 10 components of alexithymia. When comparing these results against the Smallest Space Analysis, 36 of those variables are located within the three narratives identified as significant to alexithymia within the previous findings. This indicates that over 83% percent of the variables identified in the quantitative analysis, match the findings in the chapter 5 strengthening its theoretical underpinnings. Consequently, the 36 strongest variables identified across the three alexithymia Narratives and the logistic regressions were incorporated into an Exploratory Factor Analysis.

6.3.2 Exploratory Factor Analysis

An Exploratory Factor Analysis (EFA) was conducted on the 36 variables retrieved from the results of the Smallest Space Analysis and logistic regressions. A Principal Components Analysis (PCA) was applied with a Promax (oblique) rotation (Kappa 4), and coefficients below 0.40 were suppressed. A fixed number of six factors was applied with a maximum of 25 iterations for convergence.

The Bartlett's test of sphericity was significant $\chi^2 (n=162) = 4093.437 (p<.001)$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling accuracy was .812. This indicated that the data was suitable for factor analysis. These initial results revealed that nine items failed to load significantly on any dimension. Field (2013) suggests that non-loaded items should be removed one by one until there is at least three non-cross loading items with acceptable loading scores. Consequently, the analysis was repeated until the data met these assumptions.

The final analysis remained significant $\chi^2 (n=162) = 997.357 (p<.001)$ with a KMO of .822. The pattern matrix evidenced three factors across a total of 16 variables that accounted for 54.08 percent of variance in the data. Factor loadings are presented in Table 6.11.

Table 6.11 The independent variables found to predict DAF-G

Item	Factor loading		
	1	2	3
Missed commit substances	.658		

Gambled pay debt	.715	
Considers self-	.795	
intimidating		
Drug addiction	.692	
Frequent verbal physical fights	.628	
Overused prescription	.752	
History antisocial behav	.772	
History offending	.577	
Custodial sentence	.803	
Perp IPV	.499	
Regular feeling hopelessness	.623	
Family psychotic disorder	.666	
Family suicide	.535	
ADHD		.772
Family ADHD		.662
Intentionally caused self-		.460
harm		

The EFA successfully deduced the original 36 variables to 16 meaningful variables. However, the results need to be reviewed, alongside the results of the SSA. While there exist shared elements between SSA and EFA, the latter being a more conventional approach to exploring relationships among variables, significant distinctions set them apart. The pivotal dissimilarity lies in their modelling of the structure within a correlation or association matrix, along with their respective modes of representation.

In SSA, the structure's information is encoded in the sequence of similarities among the variables in the association matrix. On the other hand, factor analysis predominantly concerns itself with the mathematical linear combinations of these factors. This approach, as articulated by Donald (1985), tends to overlook the qualitative essence of the interconnections between variables. In factor analysis, linear combinations of variables (i.e., factors) are extracted to meet predetermined mathematical criteria, often involving variance maximisation. Inevitably, this entails neglecting some variance to obtain a manageable number of factors. The representation of these factors undergoes further adjustment through "rotation" to refine the factor structure post hoc. Additionally, variance is sacrificed by discarding variables that do not exhibit high correlations with these mathematical solutions.

Contrastingly, SSA seamlessly translates the associations in the association matrix into geometric distances in its representation. Furthermore, SSA operates based on the rank order of correlations between variables, as opposed to their absolute values, as elucidated by Guttman (1968). Consequently, SSA can yield solutions with minimal dimensionality and can mitigate some of the noise inherent in real-world data. The resulting configuration of points in SSA arises organically from the relationships between variables, rather than being constrained by predefined axes, as is the case in factor analysis. This enables direct

examination of the configuration without making assumptions about orthogonal dimensions, as highlighted by Canter and Heritage (1989).

In the context of the current study, having reviewed the remaining variables from the EFA, it is plausible to assume that the EFA may have removed some of the qualitative essence of the interconnections between the variables. For example, whilst some of the variables remaining from the EFA are present in the original SSA categories, they do not appear to be as plausibly correlated to both the existing research on alexithymia and the original data set. For example, within the compromised child narrative, the SSA denoted many responses in relation to Adverse Childhood Experiences (ACE). However, the remaining variables from the EFA deduces no significance for these variables, this is despite substantial historical evidence linking ACEs to poor life outcomes including Alexithymic traits. Consequently, the SSA results may be preferred over those obtained from the EFA, for further developing the aims of the current study. This is primarily because the SSA's approach relates closely to an association matrix, unlike factor analysis, which relies heavily on linear combinations of factors. Moreover, SSA accommodates both low and highly correlated variables, grouping them based on facets or themes, whereas factor analysis tends to disregard variables that do not exhibit strong correlations with the extracted factors.

6.4 Discussion

The present study provides support for the hypothesis and confirms the findings of the original study (chapter 5), which identified factors that may predict alexithymia. This finding is significant, as the current study aimed to examine individual narratives and their interactions within the population sample, while the binary logistic regressions effectively assessed the strength of these narratives in predicting alexithymia symptoms. This not only

underscores the advantages of utilising Narrative theory in psychological research but also reaffirms the benefits of integrating qualitative and quantitative research methods to bolster the validity of the results.

Some discrepancies in the data, however, were anticipated and observed. Despite a substantial number of variables identified in the narrative analysis being predictive of alexithymia symptoms, there was a percentage (of just under 17%) which appeared in the narratives but did not demonstrate any predictive capacity for components of alexithymia. Several explanations may account for this finding. One potential factor is the inclusion of both clinical and non-clinical data in the logistic regressions, a decision made to enhance the generalisability of the results to the broader population. However, it is worth noting that alexithymia is predominantly observed in clinical cohorts.

Consequently, the inclusion of the non-clinical sample may potentially weaken the predictive strength that could otherwise be observed in a purely clinical sample. This could explain why certain variables are more prominently visible in the previous study which compares both populations. Furthermore, it was recognised prior to conducting the quantitative analysis, that the SSA has some limitations due to its reliance on the unique experiences of individuals. As a result, some participants may report characteristics across multiple narratives, leading them to fall into one overarching narrative with overlapping characteristics in certain areas.

Consequently, while certain characteristics may visually manifest in a particular narrative, their strength as predictor variables for alexithymia symptomology may be lower than other characteristics.

Given these possible explanations for the observed discrepancies, it underscores the importance of utilising those strongest variables found from the SSA to retain those variables that may not exhibit the strongest correlations but may still be relevant in the context of clinical populations. It is also important to note that participants who scored "low" or "average" on different components of alexithymia were categorised as non-Alexithymic for the current study, potentially leading to an underrepresentation of the true impact of life experiences on the development of Alexithymic traits. As a result, the additional characteristics identified in the original study may still hold relevance to alexithymia narratives, even if their predictive strength is not as robust as others.

Despite this, the EFA was instrumental in supporting the findings of the original data revealing that more than 83% of the variables identified in the previous study do indeed predict alexithymia. These combined findings will contribute to the development of an intelligible screening tool, enabling clinicians to identify an individual's overarching narrative and provide appropriate intervention recommendations. Further studies will now consider combining the remaining questions with the PAQ - Short form and the narratives identified in chapter 4 to create a screening tool which can be tested for its efficacy in a clinical setting. The primary aims for these further chapters will include assessing if the newly developed screening tool enhances clinician awareness, identifies barriers to therapeutic treatment, and highlights risks associated with individuals falling into one of the three previously identified high-risk narratives on the alexithymia spectrum. The final aim will be to analyse the data from the trial to determine if the screening tool effectively differentiates across the population sample.

In conclusion, the study's findings support the results of the previous research and the use of narrative theory in the psychological domain. Moreover, it strengthens the scientific rigor of the findings, justifying the trial use of the newly developed screening tool. If successful, the trial would set a precedent for developing similar screening tools in other psychological areas that incorporate personal narratives alongside standardised tests, promoting a more personalised approach to therapeutic treatment. This approach holds significant promise, particularly in the current mental health crisis, potentially leading to more structured interventions in tier one services. The new screening tool may also facilitate early identification of treatment barriers, enabling more effective early intervention strategies, and improved identification of individuals in need of higher-level mental health support.

Chapter 7. Piloting an Alexithymia Screening tool to facilitate Early Identification of Alexithymia and Risk Consideration

7.1 Chapter Overview

The upcoming chapter examines the trial of the newly developed screening tool, offering an overview of its results in a clinical setting. It also covers the reliability and validity testing conducted post-trial. This chapter explains the rationale behind the research, the processes for testing reliability and validity, and the tool's effectiveness in identifying individuals most at risk for alexithymia within a high-risk participant sample.

7.2. Introduction

The United Kingdom is currently grappling with a significant mental health crisis, exacerbated by a range of factors including the aftermath of the COVID-19 pandemic and systemic issues within healthcare provision (Daly, et al., 2022; Pierce et al., 2020). Mind, the UK's largest mental health charity, has revealed data showing that in the span of just one year, over 17,000 reports of serious incidents were filed by mental health staff (Care Quality Commission, 2024). These incidents, which occurred across various settings including hospital, community, and residential care, encompass a wide range of distressing outcomes for patients, from long-term damage and psychological harm to cases of abuse (CQC, 2024).

This crisis is not uniform across the population; it disproportionately impacts certain groups, including young people, women, clinically vulnerable adults, disabled people, and those living in the most deprived areas of England (Lowther-Payne et al., 2023). The Office for National Statistics data indicates a continued doubling in depression rates but a notable

decrease in the diagnosis of depression by general practitioners, suggesting a worrying decline in access to mental health care (Cullum-Attwell, 2022). Evidence suggests that these issues were on the rise prior to the pandemic, fuelled by socio-economic factors and existing inequalities (Pierce et al., 2020). Polek et al. (2020) highlight the exponential rise in self-harming behaviours in England since 2015, a trend that sharply accelerated during the pandemic. This rise underscores the urgent need for a nuanced understanding of the crisis, moving beyond generalised statements about the pandemic's impact to acknowledge the significant and ongoing challenges faced by the most vulnerable in society.

Exacerbating factors further is the cultural shift from personalised care to more generic programme delivery that has been introduced since the COVID-19 pandemic (Mann, et al., 2021). This shift has resulted in an increase of remote consultations and therapeutic support. Additionally, staffing shortages, exacerbated by COVID-19, have significantly impacted the capacity of mental health services to provide person-centred approaches (De Knock et al., 2021). In many instances, these shortages have led to reduced access to outdoor areas, activities, and necessary patient support (Spoorthy, Pratapa & Mahant, 2020). Patients have reported a lack of engagement with therapeutic activities and a rise in violence due to boredom and insufficient staffing to respond to incidents effectively (Mann, et al., 2021; De Knock et al., 2021; Spoorthy, et al., 2020). Additionally, when staffing levels are low, the ability of healthcare providers to follow least restrictive practices is compromised, affecting patients' rights and overall wellbeing (Muller et al, 2020).

While the pandemic led to positive discussions about how to manage mental health remotely, resulting in new initiatives such as care pathways that aimed to engage patients from

admission through to goal setting and discharge (Byrne, et al., 2021), such initiatives have not come without challenges. Moreover, the adaptation to online platforms for healthcare delivery, while initially a means to maintain services, has become a more common practise (Whelan et al., 2020). Video consultations and remote meetings, though useful, cannot always replace the depth of in-person interactions (Mann, et al., 2021). Patients and healthcare providers have encountered difficulties building relationships and rapport through digital means, which may impact the quality of care and patient engagement (Mann, et al., 2021). The ‘What Matters to You?’ campaign in Scotland highlights the importance of meaningful conversations and connections (NHS, 2024). Given the evidenced connections between alexithymia and co-morbid mental health conditions, it is concerning that many mental health organisations and charities do not screen for it. However, given the findings surrounding Narrative experiences and alexithymia thus far, it is likely that the identification of alexithymia on its own would not necessarily highlight those most at risk of negative life outcomes. Of course, there is also the added concern of how-to best support those with alexithymia once they have been identified.

Research has already highlighted that techniques to treat alexithymia are conflicting. For example, Cognitive Behavioural Therapy (CBT), with its structured approach, has been widely adopted, aiming to reconfigure maladaptive cognitive patterns (Cameron, Ogrodniczuk & Hadjipavlou, 2014). However, the persistent nature of alexithymia, as demonstrated in the work by Morie et al. (2015), suggests that the core symptoms of alexithymia may not be amenable to traditional CBT techniques. This resilience implies a need for therapeutic innovation beyond the conventional paradigms. Investigations into mindfulness-based interventions suggest a potential moderating effect on alexithymia, proposing that enhanced mindfulness could lead to symptomatic alleviation (Santarnecci et

al., 2017). Nevertheless, the variable definitions and operationalisations of mindfulness necessitate a rigorous evaluation to establish its true impact (BMJ, 2021). This discrepancy calls for a comprehensive examination of mindfulness as a multifaceted construct and its application in the context of alexithymia.

Therapeutic approaches such as Relational Psychodynamic Therapy, and Internal Family System (IFS) therapy present alternative avenues that may better navigate the complexities inherent in alexithymia (Karger, 2021). These modalities emphasise the significance of interpersonal relationships and internal dynamics, offering a departure from the symptomatic focus observed in more traditional therapies and potentially facilitating more meaningful emotional engagement (Karger, 2021). Similarly, the endogenous hormone Oxytocin, implicated in socio-emotional processes, introduces a novel perspective in treating alexithymia. While intranasal administration of Oxytocin has been shown to hold promise for enhancing emotional recognition capabilities in individuals with pronounced symptoms (Luminet et al., 2011), ethical considerations, particularly regarding its use in addiction-prone populations, necessitate a cautious and ethically sound approach.

A potential way to induce Oxytocin release naturally is group therapy, however, the efficacy of group therapies for alexithymia remains a contentious issue within the literature, with studies reporting divergent outcomes. This discrepancy is believed to be fuelled by fractured therapeutic alliances, where clinician biases toward individuals with alexithymia may be impeding upon treatment effectiveness, thus influencing the outcome of group-based therapeutic approaches (Speranza et al., 2011).

In light of these findings, it is evident that alexithymia requires a tailored therapeutic strategy that is flexible and comprehensive. Therefore, it is imperative that research continues to employ empirical rigor and clinical discernment to elucidate the therapeutic mechanisms effective against the nuances of alexithymia. Advancements in this domain may yield more successful pathways for intervention, and refined risk assessments that could substantially enhance clinical practice and patient outcomes. This poses the question surrounding which clinical settings are best placed to support alexithymia research. Addiction rehabilitation centres often provide a unique confluence of characteristics particularly conducive to such investigations.

Firstly, addiction rehabilitation centres typically host a demographic that evidences higher prevalence rates of alexithymia. This co-occurrence with addiction is well-documented, with alexithymia frequently associated with substance use disorders (Aleman, 2007; Cleland et al., 2005; Thorberg et al., 2011). Given the etiological complexities of addiction, which encompass trauma, escapism, co-morbid mental health concerns, personality traits, and genetic factors, these centres are poised for multifaceted research.

Individuals grappling with addiction often turn to substances or behaviours as a maladaptive coping mechanism, reflecting underlying difficulties in emotional regulation and processing. Trauma, both acute and chronic, has been recurrently implicated in the path to addiction, serving as an escape from the distressing memories and associated affect (Evren et al., 2010). Co-morbid mental health conditions further entwine with addiction, wherein alexithymia may exacerbate the distress of these conditions, creating a feedback loop that fuels addictive behaviours (Bruce et al., 2012; de Haan et al., 2012). Personality traits, particularly those associated with affect dysregulation, impulsivity, and an external orientation toward thinking,

also interlace with the onset and maintenance of addictive behaviours. Moreover, genetic predispositions have been observed to shape vulnerability to both alexithymia and addiction, suggesting an innate component in their interrelation (Craparo, 2011).

Consequently, rehabilitation centres inherently offer a microcosm where these factors are present, allowing for a detailed examination of alexithymia within the context of addiction. The controlled environment provides a setting where longitudinal and cross-sectional studies can be conducted with relative stability, granting researchers the ability to track changes over time and the impact of therapeutic interventions. However, prior research has already underscored the complexity of measuring alexithymia within these cohorts, particularly with tools such as the TAS-20, which may not capture the full spectrum of the condition (Mitrovich & Brown, 2009). This suggests that rehabilitation centres could serve not only as research sites for examining the prevalence and impact of alexithymia but also for refining assessment tools. Given the critical role of accurate diagnosis in treatment, these centres could facilitate the validation of more nuanced measures.

The intricacy of addiction pathology, particularly with alcohol and other substances, and the paucity of studies utilising diverse scales for alexithymia, indicates a gap that rehabilitation centres are well-positioned to fill. By accommodating a concentrated population with high alexithymia and addiction prevalence rates, these centres could provide invaluable insights into the efficacy of various treatments and their interactions with alexithymia. Despite this, research within these centres is not without its challenges, particularly considering the influence of trauma and other variables that may confound findings. Nevertheless, these centres offer a fertile ground for advancing our understanding of alexithymia and its

intersection with addiction, potentially informing both clinical practice and the broader field of psychopathology.

7.2.1 Current Study

The current study sought to fulfil this gap in the literature by utilising a residential rehabilitation centre for those struggling with addiction to pilot the newly developed screening tool. Generally, a pilot study should include at least 15-20 participants to ensure meaningful results (Bickman & Rog, 2013). Nevertheless, it is important to note that the sample size of a pilot study should be determined based on the specific needs of the study and the resources available (Zikmund, 2010). Therefore, this pilot study was guided by the resources available at the rehabilitation centre. Once participants completed the scale and had been assigned to an overarching narrative, they were asked to reflect on whether they feel that the narrative they were assigned was an accurate reflection of their “inner narrative”. The response to this question was then analysed in combination with their Therapist's interpretation as to whether the narrative assigned was a “good fit” based on their knowledge of the client. Finally, it was determined how many individuals fit into each overarching narrative, to provide useful insight into whether the screening tool effectively differentiates individuals based on their unique life experiences.

7.2.2 Aims

To summarise, the aims of the current study were:

1. To identify whether the data obtained from the newly developed screening tool can support sufficient differentiation across the data set.

2. To determine whether the Narratives assigned to participants provides an accurate reflection of the “inner narrative”.

7.2 Method

7.2.1 Participants

Participants included twenty UK residents aged between 20 and 62 with a mean age of 42.3. Six participants identified as female, and fourteen participants identified as male. The study also included responses from five therapists, their demographics information was not collected. All participants were recruited via an expression of interest utilising opportunity sampling from a government funded residential rehabilitation centre in the midlands supporting those with addiction. All residents were substance free and had completed a detox prior to being accepted into the residential programme. None of the participants were on medication to treat addiction such as opioid replacements. An aim of the screening tool was to effectively differentiate individuals who may present with mental health concerns and co-morbid alexithymia, therefore there was no need to incorporate an extensive exclusion criterion to the residents participating within the study. This was due the centres existing exclusion criteria which did not allow for any individual to become a resident if they are below the age of 18. Furthermore, to be accepted into the centre, any resident must evidence a history of mental health concerns. Consequently, the participant sample contained within the centre were a population that is representative of those who are likely to present with alexithymia and a co-morbid mental health concern. In terms of therapists, all those who participated were qualified therapists and trained to support individuals with mental health. This ensured that, in the event of a participant becoming distressed, they had the skills, knowledge and experience to manage the situation effectively and safely.

There were no inducements offered for participation. Full ethical approval was granted from the approving ethics panel prior to data collection, and informed consent was gained from all participants. Finally, participants were also informed of their right to withdraw before, during and after data collection, along with the relevant time frames to do so.

7.2.2 Procedure and Materials

Prospective participants and therapist were informed about the study through advertisements placed in the centre and the research was discussed during a team meeting and a therapy group session. All potential participants attended a group meeting with the primary researcher to learn more about the study. Enrolment was limited to those who expressed interest after this informational session. Screening sessions were scheduled on predetermined days and times within the centre. It was emphasised to participants that choosing not to participate would not affect their treatment in any way. Prior to the start of the study, participants and therapists received an information sheet and consent form. These documents detailed the study's objectives, the data usage and storage protocols, and participants' rights, including the ability to withdraw from the study at any time during its duration and up to a week post-participation.

Although the study included a vulnerable participant sample. The centre's policies and procedures prohibited admitting residents who posed a significant risk to themselves or others. All participants were adults, over the age of 18, and risk assessments were consistently maintained throughout the study duration.

For screening purposes, the residents were provided with the Perth Alexithymia Questionnaire (PAQ) Short Form. This tool served to rapidly screen for potential Alexithymic traits. Example items on the PAQ-Short Form included, “When I’m feeling bad, I can’t tell whether I’m sad, angry, or scared” and “I don’t pay attention to my emotions”, with responses recorded on a 7-point Likert scale (1 representing 'strongly disagree' and 7 'strongly agree'). Aggregated scores from the PAQ-Short Form determined continued participation. A score ranging from 11 to 42 warranted additional screening, following guidance from the PAQ authors that scores below 11 indicated "Low" Alexithymic traits.

If further assessment was necessary, participants were presented with 21 questions that correlated with three significant narratives for alexithymia symptomology, The Compromised Child, The Compromised Adult, and The Alexithymic. These questions were interspersed within subthemes such as childhood experiences, addiction, offending, and clinical risk factors, strategically organised to reduce bias. Participants responded to questions such as “In your childhood, were there any experiences of physical maltreatment?” and “Have you ever been subject to a custodial sentence?” with a 'yes' or 'no' response, they could also opt to not respond to any item. Questions were marked with a triangle, star, or circle to code the relevant narrative, The Alexithymic, Compromised Adult, and Compromised Child, respectively. The 'yes' responses for each symbol were tallied. The total count for each narrative was then divided by 7 and multiplied by 100 to calculate a percentage. For instance, a tally of 4 for the Alexithymic narrative would yield a score of 57% ($4/7 * 100$).

Participants were categorised under the narrative with the highest percentage. In cases of equal percentages across narratives, participants were classified as having a mixed profile. The identified narrative was then read back to the participant for agreement, rated on a scale

of 1 (strongly agree) to 5 (strongly disagree). With consent, participants were asked if their results could be shared with their therapists, who were then also requested to rate the narrative fit using the same scale based on prior therapeutic work.

Upon participant consent, the narrative data was integrated into the participants care plan, in the hope that it would enrich their personalised treatment approach. Upon conclusion all participants and therapists were given a debrief form alongside a verbal debrief.

7.3 Results

Twenty people agreed to voluntarily participate within the pilot study and of those, only one was unable to proceed with the additional screening due to their PAQ scores being below the cut off. The remaining participants were all able to be differentiated into a narrative based on their responses to the narrative screening questions. Table 7.1 outlines the number of participants that fit into each narrative.

Table 7.1 *Number of cases assigned to each Narrative*

Theme	Number	Percentage
The Compromised Child	7	37
The Compromised Adult	3	15.7
The Alexithymic	9	47.3

To ensure reliability of the results generated, interrater reliability was examined on the data collected. Interrater reliability refers to the degree of agreement among independent observers or raters who measure, judge, or assess the same phenomenon (Gisev et al., 2013).

Essentially, it is a metric used to quantify the consistency between different raters' evaluations. In the context of research, particularly studies involving qualitative assessments or screening tools that require interpretation, interrater reliability ensures that the instrument used is yielding stable and consistent results, regardless of who is doing the rating (Gisev et al., 2013).

For instance, when using screening tools like the one pertaining to the current study, different clinicians or researchers might interpret results differently. High interrater reliability indicates that different raters are consistently arriving at similar conclusions for the same responses, which strengthens the confidence in the tool's objectivity and the validity of the findings (Tinsley & Weiss, 1975).

The benefits of ensuring high interrater reliability in studies are that it identifies consistency and validity of the findings. If different raters consistently agree on their assessments, it supports the claim that the tool is accurately measuring what it is intended to measure (Gisev et al., 2013). Additionally, it allows the results of the screening tool to be more generalisable suggesting that the tool could be used reliably across different settings and populations. It also assists to minimise subjective bias in the interpretation of results because when raters independently agree on the same scores, it implies that the tool's results are less likely to be influenced by an individual rater's bias or perspective. Therefore, assessing the interrater reliability acts as a form of quality control in research methodologies that rely on subjective assessments which is particularly important in psychological testing, observational studies, and clinical diagnostics (Gisev et al., 2013).

The interrater reliability testing revealed that there was substantial agreement between the participants and the therapists (Kappa = 0.791, 95% CI 0.46–0.91). To determine predictive validity, a bivariate correlation analysis was conducted. This revealed a positive correlation between the participants and therapists' responses, $r(19) = .687$, $p = .001$. Additionally, a simple linear regression was utilised to determine if the participants responses to their reported inner narratives significantly predicted the therapist responses. The overall regression was statistically significant $R^2 = .472$, $F(1, 17) = 15.2$, $p = .001$. Therefore, it was concluded that participants responses significantly predicted therapists' responses $\beta = .500$, $p = .001$. However, interestingly over half of the participants who fell within the higher risk Alexithymic narrative, only scored within the “average” range for alexithymia traits on the PAQ-short form.

7.4 Discussion

The implementation of the screening tool within the study yielded results that distinctly categorised individuals into varied narrative profiles. The preponderance of participants assigned to the Alexithymic narrative aligns with extant literature that postulates a heightened prevalence of alexithymia within addiction populations. However, the salience of the Compromised Child and Compromised Adult narratives within the data set not only corroborates prior findings, but also substantiates the stratification of alexithymia, illuminating a spectrum that transcends mere prevalence to encompass associated risks.

The dialogue between the participants and their therapists elucidated an intriguing recurrence of admissions among individuals classified within the alexithymic narrative, underscoring a potential correlation between the alexithymic profile and diminished therapeutic outcomes. Such a pattern may indicate an increased propensity for these individuals to relapse or to

derive less benefit from standard therapeutic interventions, thereby representing a high-risk category. Furthermore, the fidelity of the study's findings was bolstered by the interrater reliability measures. The congruence in the interpretation of results between the participants and their therapists enhances the credibility of the alexithymia Narratives, furnishing the study with robust reliability and fortified validity.

Nonetheless, the study was not without methodological challenges. The ambiguous nature of certain queries within the screening tool, particularly those pertaining to involvement in violent behaviour and altercations, such as “Have you frequently been involved in verbal or physical altercations” surfaced as an area necessitating refinement. A participant's clarification request, owing to professional duties entailing potential violence, underlines the imperative for precise and context-sensitive question phrasing. Another unexpected observation was the lower scores on the PAQ-short form among those fitting the Alexithymic Profile compared to other narratives. This phenomenon prompts further reflection on the efficacy of self-reported measures regarding emotional states in alexithymia research. The alternative approach, employing factual life event inquiries such as those included in the newly developed screening tool, might advocate for a methodological shift away from emotion-centric questions.

To this end, incorporating all narratives from the preceding research and not solely those associated with alexithymia, could offer a more comprehensive assessment of risk and support requirements, including those not exhibiting alexithymia but who may benefit from interventions targeting other conditions such as PTSD, which could align more closely with the Warrior profile.

The re-evaluation of the screening tool and original study data to isolate questions most pertinent to the remaining profiles would be an essential step in this expanded approach. The current study, in this regard, has substantiated the applicability of narrative profiles within alexithymia research and has unveiled a competent mechanism to distinguish individuals within addiction cohorts. The trajectory of future research now requires a pivot towards assessing whether such differentiation bears therapeutic dividends in clinical cohorts and whether the delineation of alexithymia profiles can augment the establishment of more effective therapeutic alliances within clinical settings.

Chapter 8. A Thematic Analysis to Understand the Therapeutic Influence of the Newly Piloted Screening Tool within a Clinical Setting

8.1 Chapter Overview

This chapter presents the details surrounding the qualitative interviews conducted to supplement the reliability and validity findings from the previous study. This part of the thesis aimed to assess whether the new screening tool represented an advancement in clinical practice. The interviews were designed to explore its impact on therapists' reflective practices, their recognition of alexithymia within the study sample, changes in client-therapist rapport, and any adoption of modified therapeutic approaches. The goal was to conclude the overall aim of the thesis which was to determine if the introduction of the screening tool led to improved therapeutic pathways for individuals affected by alexithymia.

8.2 Introduction

Care planning is a fundamental component in the delivery of effective mental health services. It provides a structured framework for addressing the diverse and often complex needs of individuals with mental health issues (Mullick et al., 2013). Effective care planning is not only crucial for delivering personalised care but also for ensuring that interventions are dynamic and responsive to the changing needs of clients (Mullick et al., 2013). This element of the thesis aims to explore the significance of care planning in mental health services, best practices for maintaining active and evolving care plans, the importance of building rapport with clients, and the specific challenges and strategies related to working with individuals exhibiting alexithymia symptoms.

Care planning in mental health services is essential because it provides a roadmap for treatment and support that is tailored to the individual's specific needs. According to Slade (2009), an effective care plan involves comprehensive assessments that inform the development of personalised goals and interventions. This individualised approach ensures that care is relevant and responsive to the unique circumstances of each client. Furthermore, care planning facilitates continuity of care, which is critical for individuals with chronic mental health conditions. It ensures that there is a coordinated effort among various healthcare providers, reducing the risk of fragmented care and enhancing the overall effectiveness of treatment (Thornicroft, 2011). Continuity and coordination are particularly important for clients transitioning between different levels of care or different service providers.

Another critical aspect of care planning is its role in risk management. Through regular assessment and review, care plans help identify potential risks and implement strategies to mitigate them. This proactive approach is essential in preventing crisis situations, ensuring the safety of both clients and providers (Glover, 2010). Good practice in care planning involves keeping care plans as active working documents that evolve in line with the client's needs. This dynamic approach is necessary because the nature of mental health conditions can change over time, influenced by various factors such as life events, treatment response, and evolving personal circumstances (Rosen, 2010).

An active care plan is characterised by regular reviews and updates. According to the National Institute for Health and Care Excellence (NICE, 2011), care plans should be reviewed at least annually, or more frequently if needed, to ensure they remain relevant and effective. This process involves reassessing the client's condition, evaluating the

effectiveness of current interventions, and making necessary adjustments. Engaging clients in the care planning process is also best practice. It promotes a sense of ownership and empowerment, encouraging clients to take an active role in their recovery (Davidson et al., 2006). Collaborative care planning, where clients are involved in setting goals and making decisions about their treatment, has been shown to improve engagement and outcomes (Davidson et al., 2006).

A key aspect of collaborative care planning is rapport building, which acts as a cornerstone for effective mental health care. A strong therapeutic relationship fosters trust, openness, and collaboration, which are essential for successful treatment (Norcross & Wampold, 2011). Rapport facilitates effective communication, enabling clients to express their thoughts and feelings more freely, which in turn helps clinicians to understand their needs better and provide appropriate support (Norcross & Wampold, 2011). Rapport building is particularly important in mental health care because many clients may have experienced stigma, discrimination, or trauma, potentially affecting their willingness to engage with services (Rogers, 1957). Establishing a safe and supportive therapeutic environment can help overcome these barriers and encourage clients to participate actively in their care (Rogers, 1957).

alexithymia, characterised by difficulties in identifying and describing emotions, can significantly impact rapport building processes. Individuals with alexithymia may struggle to engage in traditional therapeutic approaches that rely on verbalising emotions (Taylor & Bagby, 2013). This can lead to misunderstandings and frustration for both clients and therapists, potentially hindering the development of therapeutic relationships. The symptoms of alexithymia, such as limited emotional awareness and difficulty in identifying feelings, can

make it challenging for therapists to gauge the client's emotional state and tailor interventions accordingly (Lumley et al., 2007). This lack of emotional insight can also affect the client's ability to engage in introspective aspects of therapy, which are crucial for many therapeutic modalities.

Additionally, individuals with alexithymia are at a higher risk of disengagement from mental health services. The difficulties they face in emotional processing can lead to frustration and a sense of ineffectiveness in therapy, resulting in premature termination of treatment (Ogrodniczuk et al., 2011). Moreover, their tendency to struggle with interpersonal relationships can make it challenging for them to build the necessary trust and rapport with therapists, further contributing to disengagement. This disengagement from services is a significant concern because it can lead to untreated mental health issues, exacerbating the individual's condition and increasing the risk of a crisis. Therefore, identifying and addressing alexithymia symptoms early in the therapeutic process is crucial for maintaining engagement and ensuring continuity of care.

Identifying clients with alexithymia is therefore essential for developing effective therapeutic strategies. However, while standardised assessment tools, such as the Toronto Alexithymia Scale (TAS-20), or the Perth Alexithymia Questionnaire (PAQ) can help clinicians recognise these symptoms, the previous research highlights that the presence of alexithymia alone does not necessarily increase risk. Instead, the research has highlighted that alexithymia is a spectrum condition, whereby certain individuals may show alexithymic traits but that these traits could be symptoms of other co-morbid conditions. Consequently, awareness of the differing narratives pertaining to alexithymia could inform the choice of therapeutic

interventions. For example, those who fall within the Alexithymic narrative may benefit from interventions that rely less heavily on emotional expression.

Adapting therapeutic approaches for clients with alexithymia may involve emphasising structured, problem-solving techniques and cognitive-behavioural strategies that focus on concrete issues rather than emotional exploration (McMain et al., 2009). Additionally, psychoeducation about emotions, and the development of emotional awareness skills may also be beneficial, helping clients gradually improve their ability to recognise and describe their feelings.

Building rapport with clients who have alexithymia may likely require patience, empathy, and a non-judgmental attitude. Therefore, therapists may need to focus on creating a supportive environment where clients feel understood and validated, even if they struggle to express their emotions (Gorin, 2010). Utilising techniques such as reflective listening and validating the client's experiences may help in fostering trust and rapport.

The risks associated with alexithymia, such as disengagement from services and the potential for untreated mental health issues, highlight the importance of thorough risk assessment and management. Therefore, it was hoped that the narrative profiles developed in the presented research may enable clinicians to be vigilant in monitoring signs of disengagement, or reduced participation in therapy, and address the issues associated with Alexithymic individuals proactively.

8.2.1 Current Study

While validity and reliability testing corroborated the consensus between clients and therapists concerning the screening tools outcomes and substantiated that clients could be differentiated into differing narrative profiles, it did not elucidate the underlying reasons for their concordance. Additionally, it failed to evaluate if the introduction of the new screening tool constituted an advancement in clinical practice. Therefore, to enhance the current research, interviews were conducted with five therapists following a twelve-week implementation phase. During the twelve-week implementation phase therapists were asked to incorporate the results of the screening tool into each clients care plan providing that they had given consent. Each therapist was given autonomy over how they could utilise the results of the screening tool to support their client's treatment journey. Therefore, semi-structured interviews were deemed suitable to discern four aims.

8.2.2 Aims

To summarise, the aims of the current study were to explore:

1. Whether there was an influence on the therapists' reflective practice following the results of the screening tool.
2. Whether therapists were better able to recognise alexithymia symptomology within the study sample following the introduction of the screening tool.
3. Were there any changes in client-therapist rapport following the introduction of the screening tool.
4. Did the results of the screening tool evoke any initiation of modified therapeutic approaches.

8.3 Method

8.3.1 Participants

Participants included five UK therapist aged between 35 and 62 years old with a mean age of 46.4 years. Three participants identified as female, and two participants identified as male. All participants were recruited via an expression of interest utilising opportunity sampling from a government funded residential rehabilitation centre supporting those with addiction. The aim of the research was to determine whether the newly developed screening tool enhanced clinical practise, therefore there was no need to incorporate an extensive exclusion or inclusion criterion as this was governed by the resources available at the participating r rehabilitation centre. Therefore, only the therapists who provided therapeutic support to the clients who participated in the original trial of the screening tool were included in the interview process. All the therapists that participated in the study were qualified, registered with the British Association for Counselling and Psychotherapy (BACP), and trained to support individuals with co-morbid mental health concerns. This ensured that, in the event of a participant becoming distressed, they had the skills, knowledge and experience to manage the situation effectively and safely.

There were no inducements offered for participation. Full ethical approval was granted from the University of Staffordshire's Ethics committee prior to data collection, and informed consent was gained from all participants. Finally, participants were also informed of their right to withdraw before, during and after data collection, along with the relevant time frames to do so.

8.3.2 Procedure and Materials

Prospective therapists were informed about the study through advertisements placed in the centre and the research was discussed during a team meeting. All potential volunteers attended a group meeting with the primary researcher to learn more about the study.

Enrolment was limited to the therapists whose clients had given explicit consent for their results to be incorporated into their care plan following the trial of the screening tool.

However, all therapists were made aware of their rights and advised that they were under no obligation to participate in the interviews. Following the obtainment of the results from the screening tool trial, and with the clients and therapists' consent, the results were discussed verbally and sent electronically to the head therapist. The head therapist then disseminated the results amongst the participating therapists and arranged a team meeting to discuss them, providing advice and guidance as to how they could incorporate the results into the client's therapeutic programme and care planning processes. Individual therapists were then given autonomy to continue delivering therapeutic interventions for a period of twelve-weeks.

Following this twelve-week period, individual interviews were scheduled with the participating therapists on predetermined days and times within a private room in the centre. Prior to the trial of the screening tool, therapists received an information sheet and consent form. These documents detailed the study's objectives, the data usage and storage protocols, and their rights, including the ability to withdraw from the study at any time during its duration and up to a week post-participation. They were reminded of this information prior to commencing the interviews and consent was re-obtained verbally.

Given the autonomy provided to therapists following the trial of the screening tool, it was identified that a semi-structured interview may be the most effective way to achieve the aims

of the current study. Structured Interviews are characterised by a strict adherence to a predetermined set of questions (Adams, 2015). This format ensures uniformity in data collection, facilitating the comparison of responses across different subjects, minimises interviewer bias and enhances the reliability and validity of the results. However, it can be rigid, potentially limiting the depth and richness of the information gathered (Adams, 2015).

In contrast, Semi-Structured Interviews, combine the consistency of structured interviews with the flexibility of unstructured conversation. While they employ a set of predetermined questions, interviewers are free to explore topics in more depth as they arise during the conversation (Adams, 2015). This allows for the collection of deeper insights into participants' experiences, attitudes, and behaviours. Semi-structured interviews are particularly advantageous in several scenarios including exploratory research, whereby the research topic is relatively new or not well understood, as they can help uncover unforeseen issues and generate hypotheses for further study (Schmidt, 2004). They are also perceived to be beneficial for topics that are complex or sensitive, as the flexibility of semi-structured interviews enables the interviewer to probe deeper, clarify responses, and explore related areas that structured interviews might miss (Adams, 2015). In studies involving diverse participant groups, semi-structured interviews can also accommodate varying levels of knowledge, experience, and communication styles, thereby capturing a broader range of perspectives. Therefore, when the goal is to gain qualitative insights rather than quantifiable data, the open-ended nature of semi-structured interviews can yield richer, more detailed information about participants' thoughts and feelings (Schmidt, 2004).

Consequently, Semi-Structured and Structured interviews serve different purposes in research. Structured interviews prioritise uniformity and ease of analysis, while semi-

structured interviews offer flexibility, allowing for deeper exploration of complex topics. The choice between the two should be dependent on the research objectives, and as such a semi-structured interview appeared particularly beneficial given the exploratory nature of the research, the complex subject matter, and the need for deep qualitative insights.

The interview schedule for the semi-structured interviews was developed through a systematic and iterative process to ensure alignment with the study's aims and research questions. Upon commencement of the interviews, rapport building questions were used in line with good practise guidelines (Brown & Danaher, 2019). These included questions pertaining to the length of time that they had practised at the participating rehabilitation centre, and any background history that they wished to disclose regarding their career. The remaining prompt questions were then utilised to develop a free-flowing discussion regarding the alexithymia Profiles, and whether those profiles elicited any changes to the client's therapeutic process. A mock interview was conducted prior to data collection to ensure that the prompt questions were open ended and neutral. This resulted in no changes being made to the interview schedule.

Interviews took place in person within a private office in the residential rehabilitation centre. A Dictaphone was used to record participants responses, and the audio files were transferred to a password protected computer. Interviews were transcribed verbatim, and data highlighting and initial coding was performed using Microsoft Office. Mind Mapping software assisted to visually organise the codes into potential themes and subthemes. Finally, a thematic table was constructed to categorise data excerpts under appropriate themes for thorough analysis.

Upon conclusion all participants and therapists were given a debrief form alongside a verbal debrief.

8.3.3 Data Analysis

Thematic analysis was employed to discern, analyse, and delineate patterns within the collected data, following the structured six-step methodology proposed by Braun and Clarke (2006). This process was grounded in their four key domains of thematic analysis: it was theoretically flexible, allowing patterns to emerge inductively from the data rather than being driven by a pre-existing framework; active in nature, recognising the researcher's role in identifying and constructing themes; reflexive, with the researcher continually reflecting on their assumptions and interpretations throughout the process; and rigorous, ensuring a systematic, transparent, and credible approach to data analysis. Initially, the researcher engaged deeply with the data through transcription of the individual interview recordings and a thorough review of the transcripts, enabling a comprehensive understanding of the material. During this initial stage, note taking was crucial for capturing preliminary insights necessary for the coding process.

The coding phase of the analysis progressed through a systematic and detailed approach. The researcher conducted line-by-line coding of the transcripts, digitally highlighting significant excerpts and adding comprehensive annotations to capture the nuanced meaning of each segment. This meticulous process ensured that both common and subtle patterns were preserved, contributing to a rich and authentic representation of the data. In determining what constituted a theme, both the frequency of codes and the salience of particular codes, even those mentioned less frequently but highly relevant to the research question, were considered. This balanced approach allowed for the inclusion of themes that reflected both the breadth

and depth of participant experiences. In line with Braun and Clarke's third phase, searching for themes, thematic maps were then constructed using the coded data to visually represent emerging patterns. These maps were integral to identifying and refining main themes, illustrating the connections between initial codes, subthemes, and overarching conceptual categories. This process formed part of a transparent and traceable analytical audit trail, essential for establishing rigour in qualitative research.

Refinement of the thematic maps was conducted to evaluate which themes required merging, omitting, or redefining, ensuring greater coherence and alignment with the central aims of the research. In determining what constituted a theme, both the frequency of codes and the salience of particular codes, even those mentioned less frequently but highly relevant to the research question were considered. This balanced approach allowed for the inclusion of themes that reflected both the breadth and depth of participant experiences. For instance, two preliminary themes, were initially coded separately but were later merged into a broader theme, as overlaps became evident during the review stage. Conversely, an earlier theme was omitted due to limited supporting data and weak relevance to the core research question. In the fifth phase, a Thematic Table was developed to systematically organise and succinctly define the finalised themes, subthemes, and their defining characteristics. The analysis culminated in the selection of rich, illustrative data excerpts to support a detailed interpretation of the research question, marking the final stage of Braun and Clarke's (2006) six-phase framework

8.3.4 Reflexivity

Reflexivity questions were utilised during the familiarisation stage to prompt the primary researcher to reflect on their own experiences and feelings associated with the research.

These questions assisted to inform the reflexivity and identified that the researcher felt enthusiastic that all interviewees found the screening tool to be a positive addition to their work, despite any discrepancies that were present. However, they did note some contradictions in reporting and were surprised by the literal interpretation of the profile headings. An intriguing observation was the similarities reported between clients in the Compromised Adult and Alexithymic profiles. However, it was concerning that those clients who fit into the Compromised Child profile seemed to benefit more from the therapy than any other group.

The researcher acknowledged potential bias based on their own experiences and interpretations. This highlighted some frustration that clients may continue to be misunderstood. Critically, they noted a potential misinterpretation of the compromised child profile amongst the therapists. However, the researcher identified many positive aspects that arose from the discussions at the time of interviews such as the self-reflection of the therapists, their adaptability, and flexibility of treatment.

After coding, it was felt that potentially more training surrounding alexithymia may have been beneficial to support the staff in understanding how the profiles may overlap. The therapist's experience was also considered, and it was felt that their long-term practice in therapy will also have influenced their own interpretations, or expectations. Therefore, this prompted the researcher to consider not just their responses, but how those responses align with the facts the therapists provided. Finally, the researchers learned that reframing the profile titles and removing experiences within the screening tools summary results, may better assist therapists in clinical settings, and mitigate any pre-conceptions.

8.4 Results

The thematic analysis of the interview transcripts identified four primary themes from the collected data. The themes along with their sub-themes are observable in table 1.

Table 8.1 *Themes derived from the data*

Themes	Description	Sub-Themes
Profile congruence	The theme captures the therapists' insights into the underlying psychological patterns, developmental histories, and emotional difficulties that define each profile, providing a comprehensive understanding of the challenges faced by these individuals.	<ul style="list-style-type: none"> • The Compromised Child • The Compromised Adult • The Alexithymic
Enhancing Clinical Practise	Enhancing Clinical Practise underscores the comprehensive advantages of the screening tool, emphasising its role in fostering a more informed, adaptive, and reflective therapeutic environment.	<ul style="list-style-type: none"> • Improved outcomes • Adapted Therapy • Recommendations
Overcoming Challenges	Overall, "Overcoming Challenges" captures the critical feedback and areas for development identified by therapists, emphasising the necessity for ongoing refinement and adaptation to enhance the tool's effectiveness and acceptance in clinical practice.	<ul style="list-style-type: none"> • Contradictions & Misinterpretations
Intertwining Considerations	This theme encapsulates the influence of societal norms on clinical practise and a need to understand cultural differences.	<ul style="list-style-type: none"> • Societal Norms • Culture

8.4.1 Analysis

8.4.1.1 Profile Congruence

8.4.1.1.1 The Compromised Child

The Compromised Child narrative aimed to generate an awareness amongst therapists regarding the co-occurrence of variables associated with negative childhood experiences and alexithymia symptomology. The trauma variables included excessive control in early childhood, overprotection, and emotional and physical abuse. It was believed that individuals fitting this profile would have experienced childhood trauma, and, that their experiences may elevate some aspects of alexithymia but not all of them. The original study found two components of alexithymia associated with this profile “difficulty defining negative feelings” and “difficulty defining general feelings”. This finding supported Elzinga et al.’s (2002) hypothesis that individuals experiencing trauma without co-morbid alexithymia may be able to process their trauma more effectively, going on to lead seemingly normal lives, thus reducing their presence in clinical populations.

Consequently, it was recommended that individuals fitting this category within clinical settings may benefit from trauma informed interventions, alongside additional support to define their feelings, to reduce the impact of alexithymia on their treatment process. There was a total of seven clients that were assigned to this profile and the data provided by the therapists indicated that those clients accurately met the description. For example, Therapist B was asked if his client Rob fitted The Compromised Child profile, he responded

“Yes, definitely, absolutely yea...errm he was invisible in his childhood and when he wasn’t he was the brunt of peoples frustration, so yea that would make total sense.” (Therapist B,

line 50)

Therapist B immediately referenced the childhood trauma to relay the connection between Rob and The Compromised Child profile but needed prompting regarding whether Rob displayed the Alexithymic characteristics associated with the profile. Once reminded of the Alexithymic traits associated with this category, Therapist B went on to report

“Rob’s favourite word in therapy was I don’t know...so when I read it back, I was like this makes perfect sense because everything was, I don’t know, I don’t know, that’s all he ever said was I don’t know” (Therapist B, line 54)

Therapist B was referring to how Rob would respond when asked to define the way he was feeling. His response depicts the challenges faced by individuals who are trying to access therapy for historical trauma. When asked about another client in this category, Therapist B continued to place emphasis on the childhood trauma in comparison to any noted Alexithymic traits.

“He wasn’t as glaringly obvious as Ben, but he had some trauma as a child....he’s very much a survivor” (Therapist B, line 62)

This comment supports previous points made in the thesis about the subjective nature of trauma and the challenges related to individual perceptions of it, indicating that perceptions can influence clinical practice. Research highlights that trauma is inherently subjective, with individual experiences and responses varying greatly, making the severity of trauma difficult to measure consistently (Smith, 2018). When asked about a third client who fell into this category, the default response from Therapist B again related to trauma.

“Oh, he had a very bad childhood, he had a very lonely childhood, he was invisible, dad was in and out of his life briefly, twice, so I think the pattern for these three was that they all had to grow up really quickly, so they almost missed childhood completely... they missed out on playing and any sort of childhood you would associate with being a happy child” (Therapist B, line 72)

Although this comment addresses childhood trauma, the therapist, upon reflectively discussing all three clients to find connections, identified that the severity of the trauma might be less crucial. Instead, the clients were linked by a "missed childhood." However, the therapist's failure to consider their connection through alexithymic traits revealed a potential flaw in the screening tools' ability to emphasise the relevance of alexithymia in the clients' therapeutic journeys. In contrast, Therapist C appeared to refer to the Alexithymic traits associated with her clients falling into this category.

“the emotions just got too much and he ran. So, he could definitely feel his emotions, but yea maybe struggle to verbalise or label them” (Therapist C, Line 36)

“Yea, I would say he could recognise Anger and basic emotions, but he didn't want to talk about them at all.”(Therapist C, Line 42)

The comments made by Therapist C highlight the importance of recognising alexithymic characteristics even among clients in lower risk categories. This observation supports the original profile, suggesting that clients in this category may experience their emotions but

struggle to articulate them in a therapeutic context, potentially leading to poorer outcomes.

When asked about any childhood trauma the client had experienced, Therapist C responded

“Yes, he did biological dad left when he was three....he was taken away from his maternal grandparent that he adored to live overseas in the army...he wasn't able to speak to her from the age of three till fifteen when the family finally returned to the U.K. Step-dad was also emotionally abusive to him...then mum divorced when he was sixteen then she had a series of boyfriends that followed...his mum basically abandoned him when they returned to the U.K”

(Therapist C, line 44)

Although Therapist C acknowledges the client's full profile, including both alexithymic characteristics and childhood trauma, it appears that clients with a more stereotypical childhood trauma are emphasised more within this category. The default focus is placed on the connection between the trauma and the profile, overlooking the associated emotional difficulties. For example, when asked about their next client, Therapist C responds

“She had a horrific childhood, she definitely fit that category, she was sexually abused for years by her step-dad, at 21 she went to the police and he went to prison. Then her younger siblings who were biologically related to her stepdad cut her off....But her mum still has contact with him. She's absolutely terrified of him.” (Therapist C, line 48)

When asked about the client's emotional presentation, it seemed that little thought had been given to this aspect of her treatment, as Therapist C responded

“Errrm she's done pretty well” (Therapist C, line 49)

This was followed by a discussion of the client's health experiences in treatment rather than her engagement or ability to accurately define her emotions. A similar pattern was observed in other therapists' responses. For instance, when asked about his client Emma and whether she fell into The Compromised Child category, Therapist D reported

“I do indeed, definitely, with the early negative experiences. She had emotional and physical abuse, isolation, excessive control all of it.” (Therapist D, Line 20)

Again, the therapist was reminded of the alexithymic traits associated with this category and was asked if their client met this criterion. He responded

“Absolutley, definitely, one hundred percent I would say that this was the case for Emma, and it was a defence strategy, she could feel those emotions more than the other two, she just struggled to define and express them.” (Therapist D, line 22)

Despite recognising that clients in this cohort have a greater ability to recognise their emotions compared to those in other profiles, therapists continued to default to linking clients' experiences with the trauma aspect of the profile. This tendency overshadowed the subtler differences in the clients' emotional awareness. This pattern was consistent in Therapist E's responses.

“Well Karen definitely experienced a traumatic childhood, she had a erm lack of protection from mum, and her dad, well her dad was very controlling and very emotionally and physically abusive.” (Therapist E, line 14)

“Yea, there was sexual abuse present as well and then she continued to go on and have controlling and abusive relationships, so she certainly fitted that part of the narrative”.

(Therapist E, line 16)

Once the childhood trauma was highlighted, it seemed that less attention was given to the emotional awareness aspects of the client's journey. It was only upon further probing that these difficulties became clearer in reflection. For example, when Therapist E was asked about the emotional elements of the profile, her response was

“Well errrm Karen appeared very open in one-to-ones but less so in a group setting...well to some extent I’m not sure because she would give the right feeling most of the time, but then appeared to seek approval and reassurance by asking if that was the right thing to say”

(Therapist E, line 18)

This statement seems to describe a client who may be giving socially acceptable responses despite having difficulties in defining their own feelings. This reinforces the previously identified risks associated with alexithymia, where clients can appear to be successfully engaging in treatment, but beneath the façade, it remains challenging for them due to their deficits in emotional literacy.

Overall, despite the tendency for therapists to strongly relate the experiences in this profile to the client's trauma, there was substantial evidence supporting the accurate differentiation of clients into this category. The clients' histories and emotional capabilities matched well with the profile description, and all therapists agreed that the screening tool effectively categorised these clients.

8.4.1.1.2 The Compromised Adult

The Compromised Adult narrative appeared to include content characteristics known to disrupt "typical" development. Evidence of this could be seen in the increased levels of alcohol consumption found within all data sets from the previous study. Excessive alcohol consumption was associated with emotional processing difficulties, poor impulse control, attention deficits, and delinquent behaviour (Attwood & Munafo, 2014; Sullivan et al., 2016; Miller et al., 2016). This correlation was reinforced by the surrounding co-occurring variables including addiction, violence, later life trauma, and co-morbid mental health conditions. Such variables portrayed an overarching narrative of an individual who has experienced adversity in their adult life. Such experiences were associated with "difficulty identifying negative feelings" and "difficulty defining positive feelings". Consequently, the results may be likened to those discussed within The Compromised Child narrative, indicating that a disruption in typical development within adulthood may induce some elements of alexithymia. If an individual was identified as fitting within this narrative, therapists were advised that they may benefit from therapeutic input that assists them in identifying negative feelings and defining positive feelings. They were also advised that without this help, it is likely that these emotional deficits will impede upon their ability to access standardised therapy effectively. Such assumptions were supported by Saladin et al. (2012) who identified that difficulties in identifying feelings and difficulties describing feelings contributes towards fractured relationships with key workers and therapists in treatment services. Therefore, it was assumed that if clinicians were not given guidance surrounding the likely characteristics associated with this narrative, they may expect such individuals to be capable of reflecting upon their own feelings and emotions during therapeutic interventions. The findings of the previous study also suggested that a preliminary intervention may need to be undertaken to support the individual to successfully achieve this prior to any standard therapeutic intervention taking

place. There were three clients in total that fit within this profile and the data provided by the therapists indicated that those clients accurately met the description. For example, Therapist D's response when asked if his client Shaun met the profile was

"Yep, yep absolutely, I mean this bloke, he just fitted this one to a tee, I mean because he had a good upbringing, he had a good childhood" (Therapist D, line 28)

However, similar to the previous sub-theme, there was a tendency to focus on life experiences detailed within the profile before considering the associated emotional deficits. He went on to report

"Yea he had a good childhood, you know and errm then he kind of like fell in with the wrong crowd. He lived in northern island and so he came to London hit the bright lights and started taking all the party drugs if you like, then the sex became the next thing because the drugs he was on reduced all his inihibtions, and then he just couldn't cope. He come into a brand new world, which it was and you know.....the other thing he was trying to keep down as well was his sexuality.... And then you know to fund his habbit he started selling his body" (Therapist D, line 30)

In addition to fitting the experience component of the profile, there was also evidence to suggest that this client was at a heightened risk of experiencing fractured relationships within the treatment process in comparison to The Compromised Child profile. Therapist D reported

"Sometimes he was nearly feral. We would be like you need to go into group Shaun, and he would be like I'm not well, and then he would just say no. Then I would have to go out and

have a word with him and say come on Shaun do you wanna be like this forever.” (Therapist D, line 34)

“Yea massively oppositional and defiant... he was hard work yea” (Therapist D, line 36)

Yet, despite the information in the profile indicating that fractured therapeutic relationships may be associated with the clients’ difficulties in emotional processing, the therapist did not appear to acknowledge this as a potential reason. Instead, he commented on his level of intellect being a barrier to him

“Because he was intelligent as well. So the saying goes, I don’t know a man who’s too dumb to do this, but plenty who are too clever. So you know, he thought he knew more, you know he knew everything” (Therapist D, line 38)

In comparison, Therapist E was asked to discuss her client William who fell into The Compromised Adult profile. She responded by referring to both his experience and the emotional difficulties that she noted during his treatment

“Well his main substance was alcohol, so the excessive alcohol consumption, yes absolutely, he also did drugs and gambled as well. I think this was to block feelings that he couldn’t process.” (Therapist E, line 44)

Therapist E was then asked specifically about the elements of alexithymia associated with this profile and whether her client matched up to those contained within the profile. She responded

“Absolutley, he really struggled to identify his feelings and would fall into this constant habit of saying what he thought he should say” (Therapist E, line 46)

There was also continued evidence of fractured therapeutic relationships with this client, but unlike Therapist D, Therapist C relayed that she believed these to be connected with his difficulties in emotional processing. She reported

“I think he would try too hard to form a bond...they would constantly feedback to him that they didn't find him genuine” (Therapist E, line 52)

Therapist E referred to her client's engagement in group therapy, indicating that his emotions often appeared somewhat false to others in the group. This observation supports prior research suggesting that individuals with alexithymic traits may give socially appropriate responses despite not actually feeling the emotions they report (Taylor et al., 1997). Another notable finding within this sample was the connection to co-morbid mental health concerns, with therapists working with clients in this category reporting this trait more significantly.

Therapist C reported

“I've never had anyone who has been so set on revenge in terms of planning it...I mean he would have been a lifer for sure....I don't know about any diagnosis...oh wait gosh here, I have got in my notes that he had an autism test age thirteen” (Therapist C, line 60-62)

Therapist D also noted significant co-morbid mental health concerns in his client

“Oh yea, absolutely.....he would get severely depressed” (Therapist D, line 34)

Overall, despite the sample for this profile being relatively smaller in comparison to others, it became evident that the characteristics attached to the profile aligned closely with the therapists’ interpretations of their clients. Furthermore, the heightened risks associated with this category in comparison to The Compromised Child became clearer. This was particularly evident by the fractured therapeutic relationships that had been reported across the cohort.

8.4.1.1.3 The Alexithymic

The Alexithymic profile highlights the complex interplay between inherent alexithymic traits and environmental factors. The research indicated that individuals who fall into this category often struggle to define, identify and express their emotions, leading to significant impacts on their mental health and coping mechanisms. A key finding within this profile was the co-occurrence of conditions such as Autism Spectrum Disorder. Individuals on the Autistic Spectrum are significantly more likely to experience alexithymia, with co-morbid alexithymia being common but not universal in this population (Kinnaird, Stewart, & Tchaturia, 2019). Additionally, those in this category often used substances to cope with negative affect, increase positive affect, and increase arousal (Hamidi, Bagby, & Taylor, 2010).

Environmental factors also played a crucial role within this cohort. In non-clinical settings, fewer environmental factors were associated with alexithymic traits. However, expected factors such as the presence of an Autistic Spectrum Condition or drug addiction were prevalent. In clinical samples, a wider range of environmental variables were present,

including violence, trauma, addiction, and mental health concerns. These factors were believed to exacerbate alexithymic traits, leading to a higher likelihood of clinical intervention. Moreover, evidence from the clinical data indicated the presence of protective factors such as parental concern for well-being in early childhood. This implied that environmental factors played a less significant role for those who presented with full spectrum alexithymia symptoms.

Implications for therapy were significant suggesting that the alexithymia symptoms found in this category may result from a genetic predisposition exacerbated by negative life experiences, which placed individuals at a higher risk of needing clinical support later in life if they encounter additional adversity. Therefore, therapists were advised to adopt early identification and intervention strategies, recognising and addressing alexithymic traits early, particularly in individuals with known risk factors such as Autism Spectrum Conditions or those who utilised substances to illicit bodily sensations likened to emotion.

Therapists were advised to consider both inherent traits and environmental factors when assessing clients to inform more effective treatment plans. They were also made aware that client who fell into this category were considered to be at a higher risk for dropping out of therapy, and that they may struggle to access standardised therapeutic processes due to its reliance on exploring feelings and emotions. There were nine clients in total that fit within this profile and the data provided by the therapists indicated that those clients accurately met the description. For example, when Therapist A was asked if his clients met the criterion her response was

“Well, he didn’t complete the full programme, so in that context I suppose he was high risk of disengagement” (Therapist A, line 2)

When asked about her client’s emotional abilities she responded

“The substances he took would suggest that he took them to create a feeling, they would have heightened his feelings I would imagine” (Therapist A, line 30)

*“He also liked getting involved in crime and fights as if he buzzed off it, so again that could be perceived as seeking a feeling, a rush couldn’t it. It would give him that adrenaline hit”
(Therapist A, line 34)*

Therapist A’s responses were also supported by Therapist E’s responses to her client’s reported behaviours in this profile. She reported that

“He did often state that substances made him feel “normal” and never really reported taking substances to escape feelings it was the opposite so that definitely fits the profile” (Therapist E, line 72)

Therapist A was also asked about a second client and whether or not she fit the Alexithymic profile, she initially indicated that this particular client had managed to graduate from the programme and had not met the “high risk” criterion on that basis but then went on to report

*“Well she had been in here before, so therapy clearly didn’t work for her in the past”
(Therapist A, line 54)*

“Yea she relapsed within a few months I think afterwards. She also disengaged from everywhere else and I know that’s part of the profile isn’t it” (Therapist A, line 58)

It appears that upon reflection Therapist A was able to securely place her client within the Alexithymic profile. Furthermore, she was able to identify the clients’ differences in emotional presentation. She reported

“Yea, yea she struggled in here as well to really get to those emotions” (Therapist A, line 48)

Therapist C substantiated the findings amongst those that fell within the Alexithymic profile, when asked about one of her clients who fell into this category she reported

“She’s very chaotic, her brain is full of stuff all the time. She’s a manic cleaner because that helps her cope with what’s inside here (points to her head) and she can’t connect to her feelings down here (points to her chest) because she’s very much in her head” (Therapist C, line 16)

Therapist C appears to be referring to a more cognitive style of thinking in contrast to an emotional style. Individuals with alexithymia often exhibit a cognitive thinking style that focuses on external events rather than internal emotional experiences. This preference for cognitive over emotional processing means that such individuals might engage more readily in logical and analytical tasks while struggling with tasks that require emotional insight or empathy. Research has shown that people with alexithymia tend to use more concrete and literal thinking, which aligns with their cognitive style (Vanheule, Verhaeghe, & Desmet, 2011). This cognitive approach can lead to challenges in psychotherapy, where emotional

exploration and expression are often crucial for progress. As a result, therapists need to adapt their techniques to address this cognitive preference, perhaps by incorporating more structured and concrete interventions that can gradually introduce emotional content in a manageable way.

Additionally, the emphasis on a cognitive style over an emotional one can impact how individuals with alexithymia experience and report their mental health symptoms. They might describe their issues in terms of situational difficulties such as cleaning, rather than emotional distress, which can complicate diagnosis and treatment (Luminet et al., 2006). This understanding underscores the importance of using tailored therapeutic approaches that consider the unique cognitive-emotional profile of clients with alexithymia. The importance of acknowledging these difficulties are further evidenced by this clients repeated visits to the therapeutic programme. Therapist C goes on to report that

“She had two previous visits and each time she left before the end of the programme”

(Therapist C, line 18)

There was a common theme in the category of clients that were repeat visitors to the therapeutic programme. When asked about another client who fell into this category Therapist C reported

“Yea he did 12 weeks and completed, but he has also been in this centre before” (Therapist

C, line 24)

The high risk associated with this category was also noted in Therapist D responses when asked if his client Steven fitted the Alexithymic profile he responded

“Steven definitely because he’s been through the programme before” (Therapist D, line 8)

Therapist D went on to describe the emotional difficulties that he noted in two of his clients that fell within this profile

“I think what it was they struggled massively with identifying their emotions, they wouldn’t get sad they would get mad. Then in terms of expressing them they would label the emotions wrong. They weren’t able to realise that they were feeling sad, but the only way they knew how to express their emotion was through anger.” (Therapist D, line 10)

Therapist D also noted ways in which these clients would engage in treatment differently to others for example, he noted

“Distraction, avoidance, deflection, you know all that kind of stuff” (Therapist D, line 18)

Therapist D is describing the ways in which he believed his clients were avoiding discussing their emotions. Individuals with alexithymia often exhibit behaviours and employ tactics in therapy that help them steer away from emotional discussions. Research suggests that these clients might focus on external events or concrete details rather than their internal emotional states, which is a common strategy to avoid the discomfort of exploring feelings (Bagby, Parker, & Taylor, 1994). They might also engage in intellectualisation, discussing their

problems in an overly rational or abstract manner to keep the conversation away from their emotions (Ogrodniczuk, Piper, & Joyce, 2011).

Another tactic observed in therapy is the tendency to minimise or downplay emotions. Individuals with alexithymia might acknowledge that they have feelings but describe them in very simplistic or vague terms, thereby avoiding a deeper exploration of their emotional world. This minimisation can hinder therapeutic progress, as it prevents the therapist from fully understanding the client's emotional experiences (Lumley et al., 2007).

Overall, the reports from the therapist suggest that the clients who fell into this profile were more high risk than the other categories in terms of their emotional awareness and engagement in their therapeutic journey. This suggests that therapists working with clients who fit this category need to be aware of avoidance strategies and employ specific interventions to gently guide clients toward recognising and expressing their emotions.

8.4.1.2 Overcoming Challenges

8.4.1.2.1 Contradictions & Misinterpretations

Despite the reported congruence across the profiles, several contradictions emerged in the therapists' reports, seemingly due to a misinterpretation about how characteristics from one profile can overlap with another. For example, a client may exhibit experiences that align with multiple profiles, but their overarching profile should guide the treatment process most effectively.

The most common misconception involved the Compromised Child profile. Therapists often assumed that if a client had an adverse childhood, they would be best suited to the Compromised Child profile. However, both the Alexithymic and Compromised Adult profiles do not exclude individuals with adverse childhoods. For instance, within the Alexithymic profile, a person can have either a positive or negative childhood. This profile focuses more on emotional difficulties than on past experiences. Consequently, therapists frequently attempted to assign clients to the Compromised Child category, despite the clients displaying symptoms that aligned more accurately with their original assigned profiles. For example, Therapist C reported that she felt her client who fitted the Alexithymic profile would have been better placed into the Compromised Child category. She reported

“I think I would definitely have placed her in the compromised child given what I know of her history” (Therapist C, line 32)

It appears that therapist C was making this assumption based on the history of the client and went on to supplement this view by reporting that this particular client had never been in treatment before. However, when this was probed further she reported that the client

“Wanted to run away at the click of a chain” (Therapist C, line 34)

The desire to run away from therapeutic processes can often be as a result of the clients alexithymia and difficulties in engaging with treatment. As previously highlighted many of these clients may attempt to use deflection or distraction techniques to avoid talking about their feelings and emotions within therapeutic processes. Despite this Therapist C reports that

“She could name the feeling but they were very intense” (Therapist C, line 34)

It is difficult to discern from the data whether or not the client was inaccurately placed into the Alexithymic category, or whether given the clients history, the therapist has made assumptions about the reasons why the client wanted to run away quoting that the client felt those emotions too intensely. Research suggests that people with alexithymia can give socially appropriate responses to questions surrounding their feelings and emotions, but still struggle to feel the emotion reported or even label those feelings correctly. However, the emphasis placed on childhood trauma was a common misconception reported. For example, Therapist C reported

“Yes I was surprised he was placed in the Compromised Adult rather than the Compromised Child but I suppose these results are based on what he’s reported...he had stepsisters that were treated better than he was and he had a difficult relationship with his mum and dad”

However, interestingly when therapists were asked to think beyond the childhood trauma they were able to recall incidents that would place them in their allocated categories. For example, Therapist C went on to report

“Thinking about it, he had witnessed a very violent death as well as an adult, and he even said thinking about it now, I don’t feel sad about that incident, I feel nothing”

This statement appears to be a moment of reflection whereby the therapist begins to question whether the clients’ experiences in adulthood may have had more of an influence on his

Alexithymic symptoms than his childhood. She goes on to reflect on a session she conducted with him whereby he struggled to verbalise his feelings

“Yes, we did a very powerful session actually where he did a drawing and said that his feelings come up to about here (points to her chest). He said he was feeling them but didn’t know how to verbalise them.” (Therapist C, Line 62)

The therapist could be describing the client's acknowledgment of somatization. Clients with higher Alexithymic traits often exhibit a significant level of physical complaints or somatic symptoms, which serve as a diversion from addressing underlying emotional issues. This somatization allows them to express distress without needing to decipher or articulate their emotional experiences (Taylor, Bagby, & Parker, 1997). By focusing on physical symptoms, these clients can avoid the emotional depth that is often required in therapy sessions.

If the client in this case could recognise bodily sensations associated with feelings but struggled to go further, then he was likely in the correct category. For example, it is anticipated that clients falling into the Compromised Child category could feel emotions more intensely than others but struggle to articulate them for fear of becoming vulnerable. In contrast, those in the Compromised Adult category may feel bodily sensations but struggle to identify the emotions they are experiencing, making it impossible to verbalise them even if they felt safe enough to do so. On the other hand, those in the Alexithymic profile would likely struggle to feel anything at all. As a result, they might seek out substances to induce feelings that others naturally report having but that they struggle to achieve. This doesn’t necessarily mean they can’t relate to others, but they likely do so through cognitive exploration of experiences, using concrete examples to report the impact of negative events

on their lives rather than how those events made them feel. One example that highlights this conflict is a client that was assigned to the Alexithymic Profile despite his therapist believing that he would be better placed in the Compromised Child based on his childhood trauma. The therapist reported

“Absolutley, because if you get through, you know, to get down to the sadness that was the bit he didn’t want to go through. So, he would try and make you feel sorry for him, he was a victim etc. etc. ok he would never acknowledge his behaviour in his addiction, he would always take it back to what was done to him” (Therapist D, line 14)

The therapist is actually describing typical characteristics of an Alexithymic profile, indicating that the client may be struggling to feel any remorse for past behaviours. Additionally, the client consistently deflects the therapist's attention to events in his life without being able to express, feel, or decipher the sadness that would be expected. These examples further reinforce the importance of spreading awareness surrounding alexithymia, and evidence the expectations that therapists may place upon their clients to “get down to the sadness” when this may be extremely difficult, if not impossible for them to achieve. It also raises concerns about the efficacy of the screening tool to improve objectivity within therapeutic settings.

8.4.1.3 Enhancing Clinical Practise

8.4.1.3.1 Improved outcomes

Given the contradictions and misinterpretations reported in the previous theme, it is important to examine whether the introduction of the screening tool had any impact on the outcomes for

the clients. Interestingly, some clients who had previously accessed the treatment program but left prematurely were able to graduate from the program this time. For example, Therapist A reports that a client who had been identified as fitting the Alexithymic Profile managed to finish the programme.

“Yea, so Bianca finished the programme, she graduated, she’s actually in one of the recovery houses” (Therapist A, line 50)

Additionally, when Therapist A was asked about the results of the screening tool and whether it informed the support given to Bianca she replied

“Yea, so I do still have contact with her on a regular basis and I will still see her as part of the aftercare, or if she ever needs a one to one. So, I still utilise the results of that to help with her therapy moving forward” (Therapist A, line 72)

Therapist A was then asked if she found the results useful and she replied

“Absolutely yes, it just makes you think about your approach with the client. It highlights the risk associated with them, and makes you think more about ways in which you can adapt your strategies based on their inability to recognise their own emotions” (Therapist A, line 74)

Therapist C also reported a better outcome for two clients that fell into an Alexithymic Profile.

“Yea, Yea she had two previous visits and each time she left before the end of the programme due to being extremely angry and not accepting feedback...I mean she’s had 16 weeks in here and she’s gone onto the recovery house” (Therapist C, line 18-20)

In this statement Therapist C highlights the additional weeks of therapy that this client received on top of the standard programme, supporting the notion that additional attention was given to this client to ensure that they completed the programme this time. However, these additional weeks were not needed for all of the clients to succeed, when asked about the second client she responded.

“He completed yea, he did 12 weeks and completed, but he has also been in the centre before” (Therapist C, line 24)

Despite these positive outcomes, there did appear to be two others who fell into the Alexithymic Profile who did not complete the programme. However, encouragingly, the therapists were still able to recognise that their lack of completion was likely due to their Alexithymic symptoms. For example, Therapist E reported

*“Yes definitely, and his difficulties surrounding his feelings and emotions was the biggest issue that I think led to him not being able to access the programme as effectively as others”
(Therapist E, Line 88)*

Similarly, Therapist A reported that her client Darren was unable to distinguish the correct emotion during one-to-one therapy. She reported

“Yea because he was just up here (raises arm in the air) thinking that his emotion was about this anger, when really it was some other emotion down here (points to her stomach)”

(Therapist A, line 40)

As anticipated, for those clients that fell into the Compromised Child or Compromised Adult profiles the outcomes were much better. None of the clients falling into the Compromised Child profile dropped out of treatment, and only one client who fell into the Compromised Adult Profile didn't complete the programme. However, intriguingly this was not through their own choice, instead they were discharged from treatment due to fractured relationships within the centre. Therapist E reported

“I think he would just try too hard to form a bond with them and they would constantly feed back to him that they didn't find him genuine or, or, well I suppose they believed he was trying too hard...he was discharged from treatment on week 11 because I think it was just too difficult for him to you know” (Therapist E, line 54)

The full therapeutic program lasts a minimum of 12 weeks; therefore, it is noteworthy that this client managed to reach week 11 before being discharged. These results may support the original profiles by suggesting that the Compromised Adult profile is slightly lower risk compared to the Alexithymic profile. However, the findings continue to underscore the need for greater awareness regarding how alexithymia symptomology can lead to fractured therapeutic relationships.

Research indicates that individuals with alexithymia often struggle with emotional expression and recognition, which can hinder the development of a strong therapeutic alliance. This

difficulty in forming emotional connections can result in clients being perceived as detached or unengaged, leading to potential miscommunications and misunderstandings in therapy (Taylor, Bagby, & Parker, 1997). Additionally, alexithymic traits such as limited emotional insight and expression can create barriers to effective therapy, making it challenging for therapists to fully understand and address the clients' needs (Ogrodniczuk, Piper, & Joyce, 2011). Consequently, these factors contribute to the fracturing of therapeutic relationships, emphasising the importance of tailored interventions and increased therapist awareness. Evidence of this can be viewed in Therapist E's response when asked if she adapted her way of working to accommodate the clients' difficulties in building relationships.

“errrm good question, no I don't think I did with William, I suppose it's hard to get someone to just be more genuine, I am not sure how you can get them to give genuine emotions when their default is to tell you what you want to hear” (Therapist E, line 58)

Therapist E's response underscores the difficulties therapists face when working with individuals with alexithymia. The challenges encountered by professionals in this field are significant, particularly since the core principles of psychotherapy involve exploring emotional distress, and the research on successful interventions for alexithymia remains limited. One of the main drawbacks of the screening tool is its lack of guidance regarding the types of interventions that could be beneficial for supporting clients with their alexithymic symptoms. However, despite its limitations, the benefits of the screening tool were extensively reported by all the therapists interviewed. For example, Therapist A reported that the screening tool provided them with a quicker starting point for therapeutic intervention. She stated

“Sometimes the clients can be halfway through the programme before we are actually able to gain this level of insight about them. The screening tool would certainly provide us with a starting point a lot quicker...I think it would also help for all the therapists to know this information in the back of their mind...just having that awareness alongside as you’re building that relationship with them, that these clients could potentially be at risk so to speak, and to make sure we aren’t expecting too much of them in terms of their emotions quickly in the programme. I think it will just enable us to prepare for what support or help might be needed going forward” (Therapist A, line 76)

These benefits were also reported by Therapist D who stated

“I think if you decided to use it at the beginning as a starting point with a suggestion that this person fits this profile, it would enable you to be aware of it throughout the process from the beginning. Whereas when you’re normally working with them, that level of insight only starts to unfold as you’re going through. But if you knew from the beginning that’s an added extra intervention....I actually think something like this would save us a lot of time. Because in here time is of the essence. A lot of people in here are on a trigger string and that would save us a lot of time” (Therapist D, line 42-44)

Therapist D was then asked to consider how much time would be saved by using the screening tool from the moment the client is admitted into treatment. He responded

“Oh gosh, I would say about 5 to 6 weeks with some of them, with some it could even be longer, some we might not figure this out until they are near the end” (Therapist D, line 48)

All the therapists indicated that the screening tool would provide them a level of insight more quickly and efficiently than what is currently achievable in the setting. They also reported that the screening tool assisted in informing more targeted interventions sooner in the programme. For example, Therapist D reported

“Rather than it taking us five weeks to figure out that Shaun’s issues started in adulthood, we get the majority of that information from the word go and if we can predict that then we can start those more targeted interventions sooner” (Therapist D, line 62)

Therapists also acknowledged a difference in outcomes when using the screening tool to inform their practise. Therapist E reported

“I would go as far as to say I don’t think he would have gotten as far as week 11 if we hadn’t tried to adapt the therapy to get him into his feelings so to speak”

Therapist B also reported that the screening tool assists with the therapeutic process allowing it to be more personalised. He stated

“I think it will be really useful to help navigate therapy and make it more specific. When you did the introduction to the clients at the start, I know the clients kept firing questions at you, but I found it really useful, because I am not one for generic strategies or generic therapy, we’re all unique you know, so I found it fascinating. Because sometimes I am quite resistant towards things you know, when it comes to science for the sake of science, but I have found the value in this because it makes something like the therapy more specific and I find it really interesting” (Therapist B, line 76)

Overall, the screening tool appeared to effectively raise awareness of alexithymia and its implications among the therapists. It also seemed to encourage therapists to apply interventions more quickly and efficiently while providing them the opportunity to reflect on their practice. Although it is difficult to determine whether the screening tool improved outcomes for the clients, there is evidence suggesting that those who previously disengaged from the program had better outcomes on their most recent visit. Additionally, despite some clients dropping out, therapists demonstrated a degree of reflection on the reasons for their clients' disengagement. Given the lack of guidance regarding interventions for individuals with alexithymia, this reflective practice can still be viewed as a success, as it provides a foundation for therapists to build upon in the future.

8.4.1.3.2 Adapted therapy

To solidify the improved outcomes observed in the previous sub-theme, attention must extend beyond reflective practice and successful completion. As previously discussed, one of the main limitations of the screening tool is its inability to provide advice and guidance on the types of interventions that would benefit those with alexithymia. Consequently, therapists were given autonomy to adapt their therapy according to the information provided by the screening tool, using their own judgment and expertise.

Autonomy in professional practice offers both benefits and risks. On the one hand, autonomy allows therapists to tailor their interventions to the specific needs of their clients, drawing on their professional expertise and experience, this individualised approach can lead to more effective and responsive care (Deci & Ryan, 2008). On the other hand, autonomy without

adequate guidance or structure can be problematic. It may lead to inconsistencies in treatment approaches and outcomes, as different therapists might apply different methods based on their subjective interpretations (Ryan & Deci, 2006).

Moreover, while autonomy can enhance motivation and job satisfaction among therapists, it also requires a high level of self-regulation and continuous professional development to ensure that the interventions remain evidence-based and effective (Gagné & Deci, 2005). It appears that the autonomy given to therapists in this context allowed them to adapt their practices to better meet the needs of clients with alexithymia. For example, when Therapist A was questioned whether the results of the screening tool were useful, he stated.

“Absolutley, yes, it makes you think about your approach with the client. It highlights the risk associated with them, and makes you think more about ways in which you can adapt your strategies based on their inability to recognise their own emotions.”(Therapist A, line 74)

Examples of adaptations were reported by many of therapists such as Therapist B who reported that;

“It made me more aware of the inner child work that may need doing”(Therapist B line 80)

Inner child work is a therapeutic practice that focuses on addressing unmet emotional needs, unresolved trauma, or emotional wounds originating from early childhood. This approach is rooted in the understanding that early life experiences, particularly adverse or traumatic ones, can have a profound and lasting impact on an individual's psychological and emotional well-

being (Pennebaker & Smyth, 2016). During therapy, individuals are encouraged to connect with their inner child, a metaphorical representation of their younger self, to process these early experiences and understand how they may shape current behaviours and emotional responses. By doing so, they can facilitate healing from past wounds and foster emotional growth.

In therapeutic practice, inner child work aligns closely with narrative approaches by emphasising the importance of personal storytelling and the power of reframing past experiences. As previously highlighted, the Narrative approach is built on the premise that the stories individuals tell about themselves shape their identities and behaviours. Inner child work facilitates this process by encouraging individuals to revisit and reframe painful childhood experiences. This allows them to re-author their personal narratives in a way that promotes healing and empowerment (White & Epston, 1990). Moreover, inner child work helps clients identify the dominant narratives that have been shaped by early life experiences. Therefore, by accessing the root of these narratives, individuals are better positioned to challenge and rewrite limiting or negative stories about themselves.

Alongside the inner child work, therapists reported utilising other methods to assist in facilitating emotional understanding. Therapist C indicated that;

“I try to use pictures with them because often the people that I come across can’t express themselves in words.” (Therapist C, line 66)

Similar adaptations were also adopted by therapist E who reported;

“I did adapt the way I worked...and tried to be more creative and visual....we used boxes that defined the events needing to be addressed, and then wrote various feelings attached to the paper in front of the boxesThen once we had finished, all the feelings from each event were then placed in a box at the end of the session....It was hoped that this would give Alan the opportunity to look back on his life events and connect the feelings to the events”

The intervention described by therapist E involves a strategy aimed at helping the client develop an emotional vocabulary. By building an "emotional dictionary," the therapist assists the client in linking bodily sensations, emotions, and specific events. This allows the client to identify and recognise similar feelings in the future when similar sensations or events occur. Such an approach is likely beneficial for individuals with alexithymia, as through this type of intervention, the client learns to associate their internal physical experiences with emotional labels, enabling them to better understand and communicate their feelings. Developing this awareness can enhance emotional literacy leading to improved emotional processing and more effective coping strategies when faced with stress or emotional distress (Lumley et al., 2007).

8.4.1.3.3 Recommendations

As previously stated, Patient and Public Involvement (PPI) in research is critical for ensuring the development of effective and practical health interventions, particularly when trialling screening tools for clinical practice. By actively involving patients and members of the public in the research process, researchers can ensure that the tools being developed are not only scientifically valid but also relevant to the needs of the end-users. One significant benefit of PPI is the ability to tailor screening tools to be more user-friendly, understandable, and accessible. This is especially important in healthcare, where tools need to be used effectively

by a broad demographic. Through public input, researchers gain insight into how individuals might interact with these tools, helping to design systems that are practical for real-world application.

Alongside PPI, it is also crucial to incorporate the recommendations of those involved with trialling the screening tool. Professionals such as therapists bring expert knowledge about clinical workflows and patient care that is essential for ensuring the clinical validity and reliability of new tools. Their feedback can help ensure that the screening tools are not only scientifically robust but also feasible for use in busy clinical environments, where time and accuracy are of paramount importance. Additionally, professionals can provide insights into how new tools may integrate with existing systems, ensuring a smooth transition from research to practice. The therapists in this trial gave recommendations surrounding the use of the screening tool, with many suggesting that it would be beneficial to use in the community, before the clients get to the point of residential therapy.

“I think this screening tool could be beneficial in a community setting, because you see a lot of these clients talk the talk, but don’t walk the walk so to speak, so lots of services get sick of hearing off them before they get to us. But what these community services don’t always realise is that everyone’s got a story to tell, you know this kind of screening lets you see what kind of past this person has had, and not only that, but it can also help identify the needs of the client. The services may then think, oh this is a bit too much for me, maybe we need to refer them to rehab or whoever is more experienced, especially when there’s trauma involved” (Therapist D, Line 52)

However, whilst all of the therapists commented on the benefits of using the screening tool within community-based services, some therapists had reservations. For example, Therapist A suggested.

“I do think it may be beneficial for community services to use the screening tool, but I think that would also depend on the level of contact they have with the client, because for them it’s quite different, you would see a client one session a week. It’s not a lot of time to allow them to build a relationship with that client and start working on their emotions and addressing it. Whereas here obviously they have that level of support around them 24/7. We also have the expertise here, whereas in the community settings I’m not sure people can be trusted to handle the results of that screening tool professionally. For example, the staff that they often see in the community are often not qualified therapists, psychologists or counsellors if you get me. I would be worried that they might want to help the client overcome their difficulties with their emotions but not necessarily have the skills to do so.” (Therapist A, line 78)

The comments from Therapist A warrant thoughtful consideration. On one hand, the screening tool has the potential to facilitate earlier interventions if implemented in community settings. Echoing the insights of Therapist D, it could also enable a quicker assessment of risk factors associated with a client, offering the opportunity for those identified as high-risk to be considered for residential therapy sooner. However, for this approach to be effective, it is essential that the individual administering the screening tool possesses the necessary competency to work with the client and is allocated sufficient time to build a strong and effective therapeutic relationship.

Another recommendation from Therapist D, was the inclusion of non-alexithymic profiles. He suggested that;

“It would be interesting to see the inclusion of profiles for individuals that didn’t have Alexithymic traits.” (Therapist D, line 52)

In the current trial, the Nurtured Child and Warrior profiles were excluded because neither exhibited Alexithymic traits. However, despite the fact that the trial setting primarily involved individuals who displayed characteristics of alexithymia, there were some clients who did not exhibit any form of this condition. The Warrior profile, in particular, focuses on individuals with a history of trauma but without alexithymia. Consequently, it is possible that individuals who did not meet the criteria for alexithymia could still have benefited from the screening process and may have been more appropriately categorised into other excluded profiles. This, in turn, could have enabled therapists to assign them to the most suitable professional, especially given the availability of therapists specialising in PTSD and the strong correlation of PTSD symptoms found within the warrior profile.

8.4.1.4 Intertwining Considerations

8.4.1.4.1 Societal norms

Societal norms refer to the shared expectations and unwritten rules that guide behaviour, attitudes, and beliefs within a society. These norms are often shaped by cultural, historical, and social contexts, and they influence how individuals behave and how others perceive them. In the context of therapy, societal norms can significantly impact a therapist’s

perception and interactions with a client, sometimes leading to unconscious biases or assumptions about the client's emotional state or willingness to engage in therapy.

For instance, traditional societal norms around masculinity often promote the idea that men should be stoic, emotionally reserved, and avoid discussing their feelings, what is sometimes referred to as "macho" behaviour. A therapist working with a male client who appears emotionally distant or reserved may unconsciously attribute this to these societal expectations, assuming the client is simply adhering to traditional masculine roles. The therapist might assume that the client does not want to talk about his feelings, rather than considering alternative explanations for his behaviour, such as alexithymia.

Such assumptions, based on societal norms, could hinder a therapist's ability to accurately assess the client's emotional needs and challenges. The therapist might overlook the possibility that the client is not purposefully avoiding emotional discussions due to societal expectations of masculinity but rather lacks the capacity to express or understand their emotions. An example of this can be observed in Therapist A's comments after her client had been assigned to the Alexithymic Profile, she reported.

“He had got a particular lifestyle, he was a little older so, you know, without being ageist or anything, he had a very particular, well males of that age wouldn't normally open up”.

(Therapist A, line 8)

Similarly, when Therapist B was discussing the profiles he reported,

“The interesting thing is that there is quite a strong male community in recovery....and the background of what people have done in contrast to going into meetings and talking about feelings is, you know quite hilarious” (Therapist B, line 62)

Male mental health has long been influenced by societal norms and stigma, contributing to significant barriers that men face when seeking help for emotional and psychological challenges. Traditional expectations of masculinity often emphasise emotional restraint, self-reliance, and the avoidance of vulnerability. These norms can create an environment in which men feel discouraged from expressing their emotions or seeking mental health support. As a result, men may be less likely to engage in therapeutic processes, potentially leading to untreated mental health issues and adverse outcomes, including higher rates of substance abuse, suicide, and other maladaptive coping mechanisms (Mahalik et al., 2003).

The stigma surrounding male mental health is deeply rooted in cultural narratives that portray men as "strong" or "macho," reinforcing the idea that expressing emotions is a sign of weakness. This belief is further compounded by societal judgments and internalised shame, making it difficult for men to acknowledge and verbalise their emotional struggles. Research has consistently shown that men are more likely to suppress emotions and less likely to seek help for mental health problems due to these deeply ingrained societal expectations (Seidler et al., 2016). Consequently, there is a growing recognition of the need to address these barriers and promote a more open discourse around male mental health.

While it is crucial to acknowledge and challenge the societal norms that prevent men from seeking help, there is also a risk of oversimplifying the reasons behind male emotional reticence. By attributing men's reluctance to seek help solely to stigma and societal

expectations, we may inadvertently overlook other significant factors that can contribute to their difficulty in expressing emotions, one such factor is alexithymia. Men may be overrepresented in alexithymic populations due to both biological and environmental factors (Levant et al., 2006), which complicates the assumption that men are merely unwilling to express emotions.

By focusing exclusively on societal norms, there is a risk of neglecting the underlying psychological conditions that may be contributing to men's difficulties in emotional expression. This can be particularly problematic when it comes to screening for conditions like alexithymia. If clinicians assume that a male client's emotional restraint is solely a product of cultural norms, they may fail to identify a deeper issue, such as alexithymia, that requires targeted intervention. This misattribution can lead to inadequate or inappropriate therapeutic responses, potentially causing more harm than good by reinforcing the notion that men simply "choose" not to open-up.

Therefore, while it is essential to acknowledge the barriers men face due to stigma and societal norms, it is equally important to avoid reducing male mental health struggles to these factors alone. Clinicians must approach each client with an open mind, considering the possibility of conditions like alexithymia and being careful not to reinforce harmful stereotypes about male emotional inexpressiveness. The comments highlight the importance of therapists maintaining an awareness of how societal norms can shape their perceptions, ensuring their approach is open, individualised, and free from preconceived notions based on gender, culture, or social expectations.

8.4.1.4.2 Culture

When screening tools are developed and trialled in the U.K., there are important considerations regarding their applicability to other countries and cultures. Cultural differences in the understanding and expression of emotions, and the very constructs that screening tools aim to assess can significantly influence how effective and appropriate these tools are when used outside of their original context.

In the U.K., screening tools are often designed within the framework of Western psychological and medical models, which may not fully account for cultural variations in how mental health issues are perceived and communicated. For example, emotional expression and the stigma surrounding mental health can differ greatly between cultures. In some cultures, emotional restraint is highly valued, and individuals may be less likely to openly express symptoms of psychological distress. This cultural nuance could result in underreporting or misidentification of mental health symptoms when using screening tools designed for Western populations, leading to inaccurate diagnoses and ineffective interventions.

Additionally, language barriers and cultural conceptualisations of mental health symptoms can also impact the validity of a screening tool in non-U.K. contexts. Even with translation, certain terms or concepts may not have direct equivalents in other languages, leading to potential misinterpretations or confusion among clients. For instance, the way people in different cultures describe somatic symptoms or emotional distress can vary, and screening tools developed in the U.K. may not capture these variations adequately. In turn, this could reduce the reliability of the tool and limit its ability to accurately assess individuals from diverse backgrounds.

Furthermore, the development of these tools is often influenced by the specific mental health care systems and professional practices in the U.K., which may differ from those in other countries. Differences in health care infrastructure, access to services, and the role of mental health professionals can affect how screening tools are implemented and interpreted across settings. For example, a tool developed in the U.K. might assume certain levels of access to therapeutic support that may not exist in other health care systems, thus limiting its practical application elsewhere.

One of the key benefits of the current screening tool was its emphasis on moving away from solely relying on reported symptoms and emotional expression. This approach was intended to prevent individuals with alexithymia from providing socially desirable or expected responses, which could skew the assessment. Additionally, the use of a narrative-based approach in the screening tool brought another advantage, the "lived experience" questions were designed to be broadly applicable across different cultures. For instance, questions regarding trauma ranged from the loss of a loved one to experiences of violence or war, topics that are not specific to Western cultures and do not depend on Western terminology. It was therefore anticipated that cultural differences would not diminish the tool's effectiveness for individuals from diverse backgrounds. Unfortunately, this expectation was not fully met, as Therapist D later reported.

"I think...they struggled massively with identifying their emotions, they wouldn't get sad, they would get mad. Then in terms of expressing them they would label the emotions wrong. They weren't able to realise that they were feeling sad, but the only way they knew how to express their emotions was through anger. Steven in particular struggled, but Syead not as much, he

would very emotional and cry, but culturally he grew up very differently to Steven, he wasn't raised in the U.K" (Therapist D, line 10)

Although the screening tool classified both individuals into the same category, and there was evidence supporting this categorisation, notable differences were observed in how each individual responded to the treatment. Specifically, Therapist A noted that while both exhibited alexithymic traits, Syead became very emotional and cried during the process, suggesting he had less difficulty with emotional expression than his peer. This observation highlights the ways in which individuals may present with similar traits but experience different emotional reactions. While this is not necessarily a shortcoming of the screening tool itself, it is crucial to recognise how a therapist's interpretations, shaped by their own cultural norms and personal views, can influence how the results are understood and applied. While individuals with alexithymia often struggle to identify and describe their emotions, it is a misconception to assume that they do not experience emotional responses like crying. Research has shown that people with alexithymia can indeed experience strong emotions, such as dysphoria or emotional outbursts like crying or anger. However, they may have significant difficulties processing or understanding these emotions, which makes it harder for them to articulate what they are feeling at the time of these responses (Taylor & Bagby, 2004).

The distinction is that although they might cry, individuals with alexithymia often cannot connect that action to a clear internal emotional state or describe why they are crying. This creates a disconnect between their emotional experience and their ability to consciously understand or communicate it (Psychology Today, 2021). Therefore, it is possible for someone with alexithymia to cry, but without necessarily being able to explain or rationalise

why they are doing so. In therapeutic settings, this understanding is crucial. Rather than assuming a lack of emotional experience, clinicians should focus on helping individuals with alexithymia develop emotional awareness and expression, even if the outward signs, like crying, are present but not fully understood.

8.5 Discussion

The thematic analysis sheds light on the complexities surrounding Alexithymia and its co-occurrence with trauma and emotional processing difficulties. The study provided valuable insights into the intersections between trauma, Alexithymic traits, and therapeutic outcomes, highlighting both the successes and challenges in clinical practice.

One of the main themes that emerged across all profiles was the tendency for therapists to emphasise clients' trauma, particularly childhood trauma, over their Alexithymic characteristics. While trauma-informed approaches are essential in understanding the context of a client's emotional difficulties, the findings suggest that therapists may sometimes overlook the subtler emotional processing issues that are central to Alexithymia. For instance, the therapists frequently defaulted to discussing traumatic experiences, even when prompted to reflect on the emotional awareness or lack thereof in their clients. This observation underscores a potential bias towards trauma as a dominant narrative in therapeutic settings, which may inadvertently downplay the importance of addressing emotional literacy.

In The Compromised Child profile, the therapists demonstrated a strong link between childhood trauma and Alexithymic traits. However, despite acknowledging the emotional difficulties faced by clients, the trauma narrative often overshadowed the more nuanced emotional processing challenges. The Compromised Adult profile revealed similar patterns,

with therapists focusing heavily on the clients' life experiences before addressing their emotional deficits. This raises concerns about the potential for misalignment between a client's emotional needs and the therapeutic interventions provided, particularly when therapists fail to give adequate attention to alexithymia's impact on emotional expression and recognition.

The Alexithymic profile, brought to light the heightened challenges associated with this group. Clients in this category were identified as being at greater risk of disengagement from therapy, and therapists frequently noted their difficulties in identifying and articulating emotions. The analysis also highlighted avoidance strategies commonly employed by clients with alexithymia, such as distraction and intellectualisation, which further complicates the therapeutic process. These findings emphasise the need for targeted interventions that account for these avoidance strategies, guiding clients toward greater emotional awareness and expression.

Furthermore, the analysis uncovered contradictions and misinterpretations in how therapists assigned clients to profiles. The most common error involved the assumption that clients with adverse childhoods should automatically be placed in The Compromised Child category, regardless of their emotional traits. This reflects a misunderstanding of the distinct characteristics of each profile, particularly in cases where Alexithymic traits are more prominent than traumatic experiences.

The analysis also demonstrated the potential of the screening tool to improve therapeutic outcomes, particularly by raising awareness of alexithymia and encouraging early intervention. Therapists reported better outcomes for clients who had previously disengaged

from therapy, and they found that the screening tool helped inform more targeted interventions. However, the tool's limitations particularly its lack of guidance on effective interventions for alexithymia were also noted. Despite these challenges, the tool provided a foundation for therapists to reflect on their practice and adapt their approaches to meet the needs of clients with alexithymia more effectively.

The analysis also touched on the impact of societal norms, particularly around masculinity, on therapeutic outcomes. Male clients were often perceived as emotionally reserved, with therapists attributing this to cultural expectations of stoicism. However, the analysis suggests that these assumptions may mask underlying Alexithymic traits, which require targeted interventions beyond merely addressing societal norms.

Finally, the analysis considered the cultural applicability of the screening tool, noting that while the tool was designed to be broadly applicable across different cultures, cultural differences in emotional expression and understanding can still pose challenges. This highlights the importance of considering cultural context when assessing clients and tailoring interventions to meet their specific needs.

8.5.1 Conclusion

The findings of this thematic analysis highlight the complex interplay between trauma, alexithymia, and emotional processing difficulties in therapeutic settings. While therapists demonstrated an understanding of the trauma experienced by their clients, there was a clear tendency to prioritise the trauma narrative over the emotional processing challenges central to alexithymia. This imbalance underscores the need for greater awareness and understanding of

alexithymia, both in terms of its impact on emotional literacy and the specific interventions required to address it.

The screening tool proved to be a valuable asset in raising awareness of alexithymia and informing more targeted interventions. However, its limitations, particularly its lack of guidance on specific therapeutic approaches for alexithymia, must be addressed to improve its effectiveness in clinical practice. Future research should focus on developing interventions tailored to the emotional needs of clients with alexithymia, ensuring that therapists are equipped with the tools necessary to address the unique challenges posed by this condition.

Moreover, the analysis revealed the importance of addressing societal norms and cultural factors in therapy. The assumptions made by therapists, particularly around male emotional expression, suggest that cultural norms can influence the therapeutic process, potentially leading to misinterpretations of clients' emotional difficulties. Clinicians must remain vigilant in avoiding stereotypes and ensuring that their approach is individualised and responsive to the needs of each client, regardless of their cultural background or gender.

Overall, this study provides important insights into the complexities of working with clients who present with alexithymia and trauma. By enhancing awareness, improving screening tools, and developing targeted interventions, clinicians can better support their clients in achieving emotional awareness and processing, ultimately improving therapeutic outcomes.

Chapter 9. Overall Discussion

9.1 Chapter overview

This thesis had two primary aims. Firstly, it sought to investigate the relationship between alexithymia and co-morbid mental health conditions to identify individuals most at risk of exhibiting Alexithymic tendencies. Secondly, it aimed to apply the findings from the first aim to a population sample identified as "at risk" for heightened alexithymia symptoms, with the goal of improving identification and support for individuals with alexithymia in clinical settings. To achieve these aims, a mixed methods approach was utilised, which included a scoping review, a narrative review, a mixed methods cross-sectional study, a quantitative analysis to support the development of a new screening tool, a trial of the new screening tool, reliability, and validity testing, and finally, a qualitative interview study to assess whether the screening tool enhanced clinical practice. Patient and public involvement elements were integrated throughout the research process.

This chapter will start by providing an overview of the key findings and placing them within the context of existing literature. It will then outline the dissemination of these findings, followed by a discussion of the key strengths and limitations of the thesis. Future research directions and clinical implications will also be discussed. Lastly, the chapter includes the author's personal reflections on the thesis.

9.2 Key Chapter Findings

9.2.1 Key findings in relation to Chapter 3

The scoping review encompassed a comprehensive analysis of 238 articles from diverse geographical regions and methodological approaches to ascertain the implications of Alexithymia across various psychological and behavioural contexts. The predominant use of the Toronto Alexithymia Rating Scale (TAS-20) among the studies highlighted its central role in Alexithymia research, despite noted limitations regarding its sensitivity to the external thinking component and its general applicability in diverse subpopulations.

Key findings from the review underscored the substantial association between Alexithymia and several psychosocial issues, notably addiction, where Alexithymia is prevalently linked with substance use disorders, suggesting that difficulties in identifying and describing feelings may impede effective engagement with treatment services. This relationship appeared to be particularly pronounced in alcohol addiction, though the research indicated a broader spectrum of addictive behaviours potentially influenced by alexithymia.

The review also revealed a complex interaction between alexithymia, trauma, and stress, where alexithymia potentially mediates the impact of traumatic experiences on individual behaviour and mental health outcomes. It was established that this mediation may increase vulnerability to various psychological distresses, such as self-harm and suicidality, indicating a need for specialised therapeutic approaches that considered the alexithymic condition and underlying emotional identification challenges.

Moreover, the findings highlighted significant correlations between alexithymia and antisocial behaviours, including offending and violence. This suggested that alexithymia

could predispose individuals to difficulties in emotional regulation, which in turn may manifest as socially disruptive behaviours. Despite the robustness of these findings, the literature still lacked in-depth exploratory work on preventative measures and interventions tailored specifically for Alexithymic traits.

In the context of parenting, the literature indicated a possible genetic predisposition towards alexithymia, albeit influenced by parenting styles and environmental factors, which could further affect developmental trajectories and psychosocial outcomes in adulthood. Finally, the review pointed to a critical gap in effective treatment options for alexithymia, with only a limited number of studies exploring therapeutic interventions. This highlighted a significant oversight in current clinical practice, underscoring the necessity for developing more specialised treatment modalities that address the unique challenges presented by alexithymia.

Overall, the scoping review elucidated the multifaceted impact of alexithymia on various life domains, emphasising the need for a holistic and integrative research approach to better understand and address the condition in clinical settings.

9.2.2 Key findings in relation to Chapter 4

The narrative review elucidated the profound implications of narrative psychology in understanding the multifaceted nature of human experiences and their psychological impacts. The field of narrative psychology emphasises the significance of stories in shaping personal identities and perceptions of the world. It underscores the limitations inherent in quantitative research that often constrains respondents to predefined responses, potentially oversimplifying complex human experiences. In contrast, narrative approaches, through methods like narrative criminology and therapeutic narrative reconstruction, engage with the

continuous and evolving stories of individuals, offering a richer understanding of human behaviour and its underlying motivations.

Central to this review was the critique of standard qualitative techniques such as Thematic Analysis (TA) and Interpretative Phenomenological Analysis (IPA), which, despite their qualitative nature, may inadvertently reduce rich narratives to discrete codes and themes, potentially losing the broader context of individual life stories. The review posited that narrative approaches provide a vital framework within clinical settings, where a patient's life story is integral to diagnosis and treatment planning. This narrative method allows for a holistic view of a patient's history and current condition, aiding in the identification of patterns that quantitative and other qualitative methods might overlook.

In criminal psychology, it was revealed that the narrative approach may assist in understanding the stories that shape offenders' actions and the judicial processes that govern such actions. This approach also appeared pivotal in therapeutic settings, where understanding and reconstructing personal narratives could significantly alter an individual's self-perception and psychological well-being.

The review further highlighted the potential integration of narrative methods with objective testing to mitigate the subjectivity of personal stories, thus preserving the authenticity of personal experiences while ensuring scientific rigor. It suggested that employing techniques such as Smallest Space Analysis (SSA) could bridge the gap between qualitative richness and quantitative objectivity by visually representing complex relationships within narrative data, thus allowing for a thematic analysis that respects the individual's story while drawing broader, generalisable conclusions.

Overall, the findings from this narrative review advocated for a balanced approach that honoured the subjective, storied nature of human experience while seeking to incorporate elements of objectivity and systematic analysis typically found in quantitative research. This not only enhanced the understanding of the phenomena but also enriched the methodologies available for the current psychological research and practice.

9.2.3 Key findings in relation to Chapter 5

The study presented a comprehensive analysis of alexithymia in clinical and non-clinical populations, utilising a narrative-driven methodology to elucidate the relationship between life experiences and the manifestation of alexithymia. Key findings from the analysis highlighted several distinct narratives that emerged from the Smallest Space Analysis (SSA), revealing how various life events and environmental factors correlate with the presence and intensity of alexithymic symptoms.

In the non-clinical sample, alexithymia was found to be less prevalent, with the SSA identifying five specific narratives: The Compromised Child, The Compromised Adult, The Nurtured Child, The Warrior, and The Alexithymic Narrative. Each narrative encapsulated a unique set of experiences and traits associated with the participants' emotional processing capabilities. Notably, the narratives of The Compromised Child and The Compromised Adult suggested that early adverse experiences and disruptions in adult life could contribute to difficulties in emotional processing and recognition, which are central to alexithymia.

Conversely, the clinical sample exhibited a higher prevalence of alexithymia, particularly among those narratives that indicated significant adverse experiences both in childhood and

adulthood. The absence of The Nurtured Child narrative within the clinical sample suggested that positive childhood experiences might not be a protective factor against the development of alexithymia as previously assumed, especially when faced with significant adversities later in life.

When examining the combined data from both samples, the SSA provided a robust analysis that not only confirmed the initial findings but also enriched the understanding of how alexithymia could be viewed across a spectrum. The thematic analysis from the SSA allowed for an understanding of the interplay between individual life events and the development of alexithymia, reinforcing the need for a tailored approach in therapeutic settings. The findings suggested that this approach should consider the specific narratives that dominate an individual's life story, potentially guiding more effective treatment interventions.

Furthermore, the study's findings underscored the utility of narrative analysis in psychological research, particularly in understanding complex conditions like alexithymia. By focusing on the narratives that individuals construct around their experiences, it was argued that researchers and clinicians could gain deeper insights into the emotional and cognitive disruptions that characterise alexithymia. This narrative approach appeared to offer a rich, contextually grounded perspective that traditional quantitative methods may otherwise overlook, providing a fuller picture of the psychological landscape in which alexithymia occurs.

Overall, the study effectively demonstrated that alexithymia is not merely a static condition but a dynamic one that is deeply influenced by a person's life experiences and the meanings they derive from them. These insights were crucial for guiding the continued research within

the thesis, instilling the importance of developing effective identification of the risks associated with Alexithymic individuals, to ensure therapeutic approaches are sensitive to the individual histories and contexts of those experiencing alexithymia.

9.2.4 Key findings in relation to Chapter 6

Chapter 6 outlined the approach and findings of the study that aimed to refine and validate the use of the previous narrative approach combined with Exploratory Factor Analysis (EFA) for the purpose of developing a new screening tool for psychological assessment. The study's goals were to not only confirm previous findings but also to strengthen the evidence supporting a mixed methods approach in clinical practice. It involved further quantitative analysis on previously collected data, leveraging logistic regression and EFA to analyse relationships between various life experiences and alexithymia.

One of the primary findings from the logistic regressions was that certain life experiences, have a statistically significant predictive relationship with alexithymia symptoms. This underscored the theory that personal history and experiences play a crucial role in psychological conditions and supported the use of narrative data in psychological evaluations.

The EFA aimed to condense the variables into a coherent set of questions that could form the basis of a new screening tool. This factor analysis was crucial in identifying key variables that group together, thus simplifying the complexity of the data and highlighting the most significant predictors of alexithymia. However, a key finding of this study was the possibility that the EFA could neglect some of the variance in the data in order to obtain a manageable number of factors by focusing solely on high correlations, potentially losing some of the qualitative benefits of the previous study. Therefore, this element reinforced the importance

of viewing the results holistically alongside the results of the SSA for the purpose of the screening tool development. Therefore, the EFA combined with the SSA helped to refine the variables to those most impactful, offering a streamlined approach to identifying and understanding the narratives that might contribute to alexithymia.

Overall, this study reinforced the potential of integrating qualitative narrative approaches with quantitative analyses to develop more effective screening tools for clinical practise.

9.2.5 Key findings in relation to Chapter 7

This study, aimed to assess the effectiveness of the newly developed screening tool designed for differentiating participants into specific narrative profiles that reflected their levels of alexithymia in combination with their narrative experiences.

The key findings from the study were the demonstrated ability of the screening tool to capably and effectively categorise participants into one of three narratives; The Compromised Child, The Compromised Adult, and The Alexithymic. This categorisation was pivotal as it confirmed the tool's ability to map the complex interactions between an individual's narrative experience and their Alexithymic traits. Moreover, there was a significant level of agreement between the participants and therapists regarding the appropriateness of the assigned narratives. This high degree of concordance suggested that the narratives identified through the screening process accurately reflect the participants' self-perceived experiences and that these were consistent with the therapists' professional evaluations.

Further reinforcing the tool's utility, the study exhibited strong interrater reliability, indicating that the tool produced consistent and reliable outcomes across different evaluators in a

clinical setting. Additionally, the predictive validity of the tool was supported by a positive correlation and a significant predictive relationship between the assessments of participants and therapists, highlighting the tool's accuracy and effectiveness.

An interesting finding of the study was that participants identified with the Alexithymic narrative, did not always show high scores on traditional alexithymia scales. This suggested that the screening tool might be capturing a broader range of alexithymic traits than those typically measured by conventional scales, potentially offering a more intricate understanding of alexithymia.

The participant sample did also reveal higher numbers of participants being categorised under the alexithymic narrative, which substantiated the prior research deeming them a “high risk” population sample and further evidencing the potential challenges with traditional therapeutic interventions. This study underscored the importance of developing tailored therapeutic approaches based on detailed narrative understanding, with suggestions being made that this approach could lead to more effective treatment plans tailored to individual needs.

Overall, the implementation of this narrative-based screening tool in a clinical rehabilitation setting not only demonstrated its potential to enhance the understanding of participants' psychological profiles but also aided in the ongoing research. To explore whether the screening tool assisted the development of personalised treatment approaches. The congruence in narrative assignment between participants and therapists enhanced the tool's practical applicability and emphasised its role in promoting a deeper therapeutic alliance by aligning therapists' perceptions with participants' self-reported experiences.

9.2.5 Key findings in relation to Chapter 8

The findings from the therapists' reflections highlighted the complexities in categorising clients based on their profiles, trauma, and emotional responses. However, each profile linked clients' past experiences with their emotional processing abilities, offering insight into how trauma, adult adversities, and alexithymic traits shaped their engagement with therapy.

The Compromised Child profile emphasised the connection between childhood trauma and specific traits, such as difficulty defining emotions. Therapists noted that while trauma was a key feature of this profile, there was some inconsistency in identifying the emotional difficulties linked to alexithymia. Clients in this category often struggled to articulate emotions but could feel them deeply. However, therapists frequently defaulted to discussing trauma over emotional expression, which suggested a need for greater focus on both aspects.

The Compromised Adult profile included clients who experienced trauma or adversity later in life. These individuals typically struggled to identify and describe both positive and negative emotions. Therapists recognised that emotional deficits played a significant role in fractured therapeutic relationships, with some clients displaying oppositional behaviours and disengagement. However, therapists also acknowledged that these emotional deficits often went unrecognised, and intellectual or social factors were sometimes blamed instead.

The alexithymic profile was marked by severe emotional processing difficulties, with clients displaying avoidance strategies and struggling to connect with their emotions. Therapists found that these clients frequently resorted to substance use or risky behaviours to elicit feelings. Emotional literacy was a central challenge, and several clients were repeat visitors

to the therapeutic program due to their difficulties in engaging with the emotional aspects of therapy.

Despite the differences across these profiles, therapists frequently prioritised clients' trauma histories over the emotional challenges posed by alexithymia. While the screening tool successfully categorised clients based on their profiles, therapists often needed prompting to reflect on the emotional aspects of treatment, revealing potential gaps in the screening tool's ability to emphasise alexithymia. Additionally, the trial highlighted the need for culturally sensitive approaches, as therapists recognised that emotional expression varied across clients from different cultural backgrounds.

Overall, the screening tool provided therapists with valuable insights into their clients' emotional capacities and histories. However, the therapists' interpretations often leaned toward trauma over alexithymia, suggesting that further emphasis on emotional difficulties and tailored interventions could enhance treatment outcomes. Moreover, early identification of Alexithymic traits and addressing cultural factors could improve therapeutic engagement and foster more effective, individualised care for clients.

9.3 Patient and Public Involvement

9.3.1 Benefits

One of the primary benefits of PPI in the current study was the indirect involvement of patients and the public through the scoping review, which synthesised findings from over 150 clinical and non-clinical studies on alexithymia. By evaluating previous methodologies, the study identified gaps and helped to refine research questions, leading to a more holistic understanding of how alexithymia interacts with personal narratives. This ensured the

research design was grounded in evidence-based practice, ultimately enhancing its relevance and utility. PPI also allowed the research to capture variations in how alexithymia manifests across different demographic groups, ensuring that data collection was more inclusive and reflective of diverse populations. This kind of landscape-level review provided the foundation for meaningful insights that would later shape both research design and data collection strategies.

Direct PPI was introduced through the inclusion of clinical and non-clinical participants, whose personal narratives provided depth to the quantitative data gathered from alexithymia screening tools. This direct involvement of participants was pivotal in contextualizing the clinical findings with lived experience. Narratives provided rich data on participants' struggles with emotional expression, access to therapy, and building relationships with clinicians, which might have been missed through standard assessment tools alone. The integration of these personal experiences added significant value to the research, making it more applicable to real-world therapeutic practices and enhancing the understanding of alexithymia's impact across different contexts.

PPI was further extended through collaboration with key stakeholders such as therapists, CEOs of partnering organisations, and independent researchers. Their input ensured that the research not only met scientific standards but also aligned with ethical and practical considerations. For instance, the feedback from organisational workers, who suggested building rapport with participants through informal pre-data collection interactions, significantly enhanced the quality of the data. This collaborative input improved participant engagement facilitated trust-building and encouraged more honest and open sharing of

experiences. The importance of such approaches is widely supported in PPI literature, as they often lead to increased validity and richer data collection (Simmons et al., 2020).

9.3.2 Challenges

While personal narratives enriched the research, there were challenges related to bias.

Participants' recollections of their experiences could be influenced by emotional states, making it difficult to distinguish between subjective and objective accounts. This subjectivity may have impacted the reliability of the data collected through personal narratives. While the narratives provided valuable insight, ensuring consistency and objectivity required careful management. The challenge lay in balancing the subjective richness of these narratives with the need for objective, generalisable data.

Another challenge in this study involved managing the varying perspectives of multiple stakeholders, such as therapists and organisational leaders. While their input enhanced the research design, it also added complexity to the decision-making process. Different stakeholders had conflicting views on methodologies, participant interaction strategies, and ethical considerations, requiring a careful balancing act by the research team. Additionally, aligning the scientific rigor of the research with practical, on-the-ground realities often created tension between ideal research conditions and real-world application.

An ethical challenge in implementing PPI involved managing the power dynamics between researchers and participants. Although efforts were made to reduce power imbalances through informal interactions like coffee mornings, the risk of perceived authority remained.

Participants might have felt pressured to engage in the study or provide certain responses,

particularly if they perceived that withholding information would negatively affect their relationships with the organisation. This challenge required ongoing reflection and adaptive strategies to maintain an ethical and respectful research environment.

In conclusion, while PPI brought invaluable benefits to this study by enhancing relevance, engagement, and depth of data, it also presented challenges, particularly around subjectivity, stakeholder management, and ethical concerns. Addressing these challenges required flexibility and ongoing reflection throughout the research process.

9.4 Critical Evaluation of Methodology

9.4.1 Scoping Review

The scoping review was the methodological framework used to map the breadth and depth of literature, identify key concepts, gaps in research, and areas for further exploration. This approach was particularly beneficial for exploring the broad, complex, and under-researched field of alexithymia in mental health populations. However, although the scoping review offered several strengths, it was not without its limitations, and it is crucial to critically evaluate this methodology to understand its role within the context of evidence synthesis.

One of the main strengths of the scoping review was its ability to cover a wide range of literature. This was particularly useful when studying the complex phenomena of alexithymia, where the topic intersects with various disciplines, including psychology, neurology, and psychiatry. However, the broad nature of a scoping review could also be viewed as a limitation. While it captures a wide spectrum of studies, there is a potential for it to lack the depth of analysis seen in more focused reviews, such as systematic reviews. This

means that the decision to utilise a scoping review may have provided less rigorous conclusions regarding the quality of evidence pertained within the studies identified.

While the flexible nature of a scoping review allowed the researcher to adapt their review process as new insights emerged, which was a key advantage when exploring a less well-defined topic. For instance, in this case, the scoping review could accommodate different definitions or diagnostic criteria for the condition, ensuring that a broad range of studies was captured. This flexibility also posed challenges. The lack of strict methodological guidelines, such as those found in systematic reviews, may have resulted in variability in how studies were selected, synthesised, and interpreted. This variability may have introduced bias, as the primary researcher might have unconsciously grouped studies together that align with their perceptions of the condition, rather than using entirely objective and stringent definitions (Levac, Colquhoun, & O'Brien, 2010).

Furthermore, scoping reviews typically do not include a formal quality appraisal of the studies included. While this approach is aligned with the purpose of a scoping review, which is to provide an overview of a topic rather than to evaluate the quality of evidence, it can also be considered a limitation. In the absence of critical appraisal, studies with weaker methodologies or biased conclusions may be included, potentially distorting the overall findings. This contrasts with systematic reviews, where quality assessment is central to the inclusion process, ensuring that only robust evidence informs the conclusions. However, measures were taken during this scoping review to ensure that the “quality” of the data was being considered. This included following the framework provided by Arksey & O'Malley, (2005) and developing a table for all the data screened which included a critical analysis component for every study screened.

Although scoping reviews are often perceived as less rigorous than systematic reviews, they can still be time-consuming and resource intensive. The need to search a wide variety of sources, including databases, and unpublished studies, can make the scoping process lengthy and complex. Moreover, the absence of a standardised approach to data synthesis meant that the primary researcher spent a considerable time deciding how to collate and present the data. While this extensive effort is necessary to capture the full scope of literature, it can be seen as a disadvantage, particularly when the goal is to provide timely insights for pressing clinical or policy issues.

In conclusion, while the scoping review was a valuable tool for mapping out the extent and nature of research in the given area, it did not come without methodological limitations. However, utilising it for the purpose of an under-researched and evolving field like alexithymia, the scoping review did provide invaluable insights, identify research gaps, and lay the groundwork for more focused, in-depth studies.

9.4.2 Narrative Review

The narrative review acted as a type of literature review to provide an overview of narrative theory, synthesising the findings from various studies and presenting them in a cohesive, narrative format. Unlike systematic reviews, narrative reviews are not governed by rigid methodological guidelines and can be more flexible in their approach. This allows for a more descriptive and interpretative synthesis of the literature. However, this flexibility also introduces several methodological challenges, which need to be critically evaluated.

One of the most notable characteristics of a narrative review is its subjective nature. Because the reviewer has significant discretion over which studies to include, how to interpret the findings, and how to present them, there is a potential for bias. The lack of a formal process for study selection means that the reviewer may unintentionally cherry-pick studies that align with a particular viewpoint or hypothesis. This lack of transparency in the selection criteria can undermine the objectivity of the review, making it difficult to assess the reliability of the conclusions. Furthermore, without a standardised appraisal of study quality, narrative reviews may give undue weight to lower-quality studies, further affecting the validity of the findings (Green et al., 2006).

However, Narrative reviews excel at synthesising complex theoretical ideas from diverse sources, which is especially useful in the early stages of doctoral research. The ability to integrate theoretical concepts from various disciplines, studies, and perspectives allows the researcher to develop a coherent understanding of the theory's evolution and relevance. This synthesis is essential for demonstrating how the chosen theory underpins the doctoral research project and how it relates to the broader literature (Baumeister & Leary, 1997). Therefore, in the context of this study, the narrative review helped to connect disparate ideas and form a cohesive narrative that justifies the theoretical foundation of the study.

For the purpose of the current study, the narrative review was particularly well-suited to exploring the historical and philosophical roots of Narrative theory, which was critical in this research. Understanding the origins and development of a theory over time helped the researcher to appreciate the foundational assumptions and principles that guide the current Narrative approaches. The narrative approach allows for a rich, descriptive account of how a

theory has evolved, making it a valuable tool for grounding a theoretical framework in the broader intellectual tradition (Jesson et al., 2011).

9.4.3 Smallest Space Analysis

In the context of this study, Smallest Space Analysis (SSA) was employed to explore the relationships between alexithymia and various environmental and psychological factors. SSA's strength lies in its ability to visually map complex relationships among variables, providing a spatial representation of how different components of alexithymia co-occur across both clinical and non-clinical populations. However, a critical examination of the methodology reveals both strengths and challenges that should be considered when interpreting the results and determining the broader applicability of SSA in similar research.

One of the key advantages of SSA, as demonstrated in this study, is its ability to uncover patterns that are not easily discernible through traditional statistical methods. By visualising the co-occurrence of variables associated with alexithymia, SSA provided insights into how different narratives such as The Compromised Child, The Compromised Adult, and The Alexithymic relate to one another. This facilitated a deeper understanding of how specific environmental factors, such as trauma and addiction, intersect with emotional deficits in Alexithymic individuals.

SSA's non-parametric nature was advantageous in this study because it does not assume normal distribution or linear relationships between variables. Given the exploratory nature of the research, where the aim was to visualise correlations between a large number of variables, SSA allowed for flexibility in analysing both ordinal and nominal data. This adaptability was

critical for exploring complex narratives involving alexithymia, which often involves non-linear interactions between psychological traits and life experiences.

SSA effectively facilitated the identification of distinct themes and narratives within the data, such as the separation of The Compromised Child and The Compromised Adult narratives. These findings are significant because they contribute to a unique understanding of alexithymia as existing along a spectrum, where individuals may present different levels of emotional deficits based on their life experiences. The thematic clustering within SSA was particularly useful in identifying potential treatment pathways for individuals based on their dominant narrative, allowing the researchers to propose tailored interventions for each group.

SSA's visual representation enabled the researchers to clearly delineate clusters of variables, making it easier to interpret the data. The graphical output allowed for a clear identification of which variables were closely associated with one another, thus supporting the construction of narratives around alexithymia. This is particularly useful for understanding how certain factors, such as trauma and emotional regulation, coalesce into broader patterns within both clinical and non-clinical populations.

A key limitation of SSA, as evidenced in this research, is the subjectivity involved in interpreting the spatial distances between data points. Although the visual output provided valuable insights, the thematic interpretation of these patterns was reliant on the researchers' subjective judgment. For instance, the delineation between narratives such as The Warrior and The Alexithymic may be open to interpretation, particularly when deciding which variables are most central to each narrative.

While SSA offers a visual map of relationships, it does not provide traditional measures of statistical significance, such as p-values or confidence intervals. This presents a challenge when attempting to draw definitive conclusions about the strength of the relationships between variables. For example, while the research identified distinct narratives, such as The Compromised Adult and The Nurtured Child, the lack of statistical measures limits the ability to determine the robustness of these findings.

Finally, SSA can be computationally demanding, especially when dealing with large datasets containing numerous variables. In this study, the SSA analysis included variables from both clinical and non-clinical samples, which added to the complexity of the analysis. The process of repeatedly comparing the distance and correlation between points to calculate the rank order is resource-intensive and required significant time and computing power. For researchers with limited resources, this could be a significant barrier to using SSA effectively in future studies.

In summary, the use of Smallest Space Analysis in this study provided a valuable framework for exploring the complex relationships between alexithymia and environmental factors. The non-parametric nature of SSA allowed for flexibility in analysing non-linear relationships, and the visual representation of data offered clear insights into the thematic clustering of variables. However, while SSA effectively supported the identification of distinct narratives, such as The Compromised Child and The Alexithymic, its limitations in terms of computational demands and ambiguity in theme definition require acknowledgment. SSA is best suited for exploratory research where the goal is to uncover patterns and relationships that can later be confirmed with more robust statistical techniques. Therefore, it was

beneficial to utilise the Exploratory Factor Analysis and binominal linear regressions to offer measures of statistical significance as more rigorous validation to strengthen the findings.

9.4.4 Screening Tool Development (Quantitative Analysis)

In this research, both Exploratory Factor Analysis (EFA) and Binomial Logistic Regression were employed to deepen the understanding of the relationship between life experiences and alexithymia, complementing the findings from the prior study. While these quantitative methodologies provide structure and statistical support, allowing for more generalisable conclusions, they also introduce specific limitations. A critical examination of their strengths and challenges reveals both the utility and potential pitfalls of these approaches in the context of psychological research.

In terms of the benefits EFA excels in simplifying large datasets by reducing numerous variables into fewer underlying factors. In this study, EFA effectively condensed 36 identified variables from previous analysis into three key factors, accounting for over 54% of the variance. This process helps in organising complex, multifaceted data into interpretable components, which is particularly useful for developing screening tools that need to be efficient yet comprehensive.

EFA is commonly used for theory generation and the identification of latent structures within datasets. In the context of this research, it facilitated the identification of underlying dimensions within the variables linked to alexithymia. This proved valuable for advancing psychological theory, as it offered empirical support for the grouping of variables that could later be tested.

By grouping related variables into factors, EFA helped ensure construct validity. The resulting factors in this study (related to alexithymia and life experiences) can be seen as theoretically coherent and statistically sound, offering a robust foundation for the subsequent creation of the screening tool. EFA also allowed the researchers to identify variables that did not contribute meaningfully to the latent factors, thus ensuring that the final model only included the most relevant predictors.

The EFA was a flexible methodology that was able to be adapted to different types of data and research questions. The use of a Promax rotation, which allows for correlated factors, was appropriate when examining psychological constructs like alexithymia, where underlying variables are likely interrelated. This flexibility enhanced the utility of EFA in this exploratory research aimed at discovering patterns within complex data structures.

However, a limitation of EFA is the subjectivity involved in deciding how many factors to retain. While statistical measures such as the scree plot or values greater than one are useful guides, the ultimate decision about how many factors to extract often requires researcher judgment. In this study, the choice to extract six factors initially, which was later reduced to three, introduces some subjectivity into the analysis.

EFA is also a purely statistical method that focuses on correlations between variables, potentially neglecting the qualitative essence of the data. This was highlighted in the study, where some variables linked to Adverse Childhood Experiences (ACEs) were eliminated during the EFA process despite strong qualitative and theoretical justifications for their inclusion. The reductionist nature of EFA may thus strip away valuable contextual

information, particularly when the data relates to deeply subjective experiences such as trauma and emotional processing.

Finally, EFA operates under the assumption that relationships between variables are linear, which may not always be appropriate in psychological research. Complex phenomena like alexithymia and trauma may exhibit non-linear relationships, and this limitation could lead to an incomplete understanding of the data. In cases where variables do not follow a linear pattern, EFA may not fully capture the underlying dynamics, leading to oversimplification of the relationships. Therefore, it was vital for both the foundational studies to be considered alongside the results of the quantitative analysis to ensure a rigorous understanding of the topic area.

In terms of the Binomial logistic regressions, they are an effective tool for identifying which independent variables are significant predictors of binary outcomes. In this study, the method was used to assess whether various life experiences could predict specific alexithymia components. The identification of 43 predictive variables across ten logistic regressions provided robust evidence of the relationship between life experiences and alexithymia, thus strengthening the theoretical underpinnings of the study.

Logistic regression does not require the same assumptions about data normality as linear regression, making it well-suited for the analysis of categorical and dichotomous variables. This flexibility allowed the researchers to explore a wide range of life experiences and their impact on alexithymia without needing to transform or restrict the data in ways that might have compromised its integrity.

Logistic regression provides useful model fit statistics, such as Nagelkerke's R-square and p-values, allowing researchers to evaluate the goodness-of-fit for each model. In this study, high R-square values indicated strong model fits, lending confidence to the results. This statistical rigor is crucial when validating findings from qualitative research, as it provides a quantifiable measure of how well the model explains the variance in alexithymia symptoms.

The focus on binary outcomes, for example, the presence or absence of alexithymia components, is particularly useful in clinical research where practitioners need clear indicators to make diagnostic or therapeutic decisions. The binary logistic regressions in this study helped distil the complex interplay of life experiences and emotional difficulties into actionable insights that went on to inform clinical practice and early intervention strategies.

However, the Binomial logistic regressions were also not without their limitations as they required outcomes to be coded in binary terms for example, high versus low alexithymia. While this was useful for clear-cut diagnostic purposes, it may have inadvertently oversimplified the complexity of the phenomena. The unique nature of scoring across a spectrum, as seen in alexithymia, might have been lost when reducing this to a binary outcome, potentially obscuring subtler relationships between life experiences and emotional deficits.

Similarly, when independent variables are highly correlated, often referred to as multicollinearity, logistic regression can produce biased estimates. In this study, some life experiences may have been related for example, substance abuse and trauma, leading to potential collinearity. This could have potentially distorted the model's accuracy and lead to incorrect conclusions about the predictive power of certain variables.

Finally, like EFA, logistic regression assumes a linear relationship between the log odds of the dependent variable and the independent variables. In reality, the relationship between trauma and alexithymia could be non-linear, with certain experiences having a disproportionately larger or smaller impact on emotional processing. This limitation may result in an oversimplification of the relationships, particularly in psychological research where non-linear effects are common. This consideration again lends weight to viewing the theoretical, qualitative and quantitative elements of the research holistically.

In summary, the use of Exploratory Factor Analysis (EFA) and Binomial Logistic Regression in this research provided a robust framework for exploring and confirming the relationships between life experiences and alexithymia. Both methodologies allowed for a deep quantitative analysis that complemented the qualitative insights gained from previous studies. The strengths of EFA in reducing data complexity and improving construct validity were critical in moving toward the development of the new screening tool, while the use of logistic regression helped identify predictive relationships that assisted to inform clinical interventions.

However, both methods had inherent limitations. EFA's tendency to overlook qualitative nuances and its reliance on subjective decision-making in factor retention, combined with the simplifying nature of binary logistic regression, may have led to oversimplification of the data. Additionally, the assumptions of linearity and independence in both methods may not have fully captured the complexities of the relationships between life experiences and emotional processing difficulties such as alexithymia. Consequently, while these methods provided valuable insights and contributed significantly to the research objectives, the

success of these tests were reliant on the combination of the holistic understandings gained from the prior studies.

9.4.5 Screening tool - Reliability and Validity Analysis

This element of the research piloted a newly developed screening tool in a residential rehabilitation centre for individuals with addiction. The primary aim was to determine whether the tool could effectively differentiate participants into three overarching narratives, The Compromised Child, The Compromised Adult, and The Alexithymic. The methodology incorporated a mixed approach, utilising both qualitative and quantitative components to assess the tool's validity and reliability. While this approach provided a comprehensive understanding of the participants' experiences, several strengths and weaknesses emerge from the study's methodological choices.

The study employed opportunity sampling within a rehabilitation centre, allowing the primary researcher to access a population with a high prevalence of alexithymia and addiction. This pragmatic recruitment strategy ensured that the sample was highly relevant to the study's aims. The inclusion of both residents and therapists added a valuable dimension to the research, enabling a multi-perspective evaluation of the tool's accuracy. Moreover, the pilot study design, although conducted on a small sample, provided an important foundation for further research while allowing for a practical evaluation of the tool's functionality in a real-world setting.

The Perth Alexithymia Questionnaire (PAQ) Short Form was used to screen for Alexithymic traits, and the additional 21 questions related to childhood experiences, addiction, and clinical risk factors were designed to align with the three narratives. This tailored approach ensured

that the screening tool captures key life events, which were critical in understanding emotional processing difficulties in alexithymic individuals. By asking specific, event-based questions for example, “Have you experienced physical maltreatment?”, the tool reduced the reliance on participants' emotional self-awareness, which was a known limitation in self-report measures for alexithymic populations.

The study's interrater reliability measures revealed a high degree of agreement between the participants' self-reported narratives and their therapists' evaluations. A Kappa value of 0.79 demonstrated substantial agreement, indicating that the tool produced consistent results regardless of the rater. Additionally, the use of bivariate correlation analysis and linear regression to assess predictive validity showed that participants' inner narratives significantly predicted therapists' assessments. This strengthened the reliability of the tool and supported its potential for broader application in clinical settings.

The study also allowed the narrative data to be integrated into participants' personalised care plans, offering immediate practical implications for treatment. This step ensured that the screening tool was not only theoretically valid but also had real-world utility, enhancing the relevance of the findings. The integration of the results into therapeutic practice highlighted the tool's potential to influence treatment outcomes by tailoring interventions to the specific needs of individuals based on their narrative profile.

One of the primary weaknesses of the study was its small sample size (20 participants). While this was acceptable for a pilot study, it limited the generalisability of the findings to larger populations. Therefore, the results may not be representative of broader addiction or mental health populations, especially given the specific context of the rehabilitation centre. Future

studies would need to incorporate larger and more diverse samples to ensure that the screening tool is applicable across different clinical settings and demographic groups.

Additionally, despite the benefits of opportunity sampling, the use of it introduces potential biases, as only those individuals who expressed interest in the study were included. This could have resulted in a self-selection bias, where individuals who are more open to participating in research may differ in meaningful ways from those who did not volunteer. Additionally, the lack of diversity in the sample, with a majority of participants identifying as male, may also have limited the applicability of the results to other populations, particularly women or individuals from different cultural or socio-economic backgrounds.

Finally, certain questions in the screening tool, particularly those regarding violent behaviour, for example, “Have you frequently been involved in verbal or physical altercations?”, were noted to be ambiguous and potentially misinterpreted. One participant highlighted this issue by explaining that their professional duties sometimes required violent behaviour. This ambiguity underscored the need for clearer, context-sensitive question phrasing to avoid misinterpretation and ensure that responses reflect the intended meaning of the questions. Misinterpretation can lead to inaccuracies in categorising individuals into their appropriate narrative, ultimately affecting the reliability of the tool.

Overall, the methodology employed in this study, piloting a screening tool in a rehabilitation centre for individuals with addiction, demonstrates both significant strengths and weaknesses. The use of opportunity sampling allowed the researchers to access a relevant population, and the tailored questions ensured that the tool captured key life events related to alexithymia. The high interrater reliability and predictive validity further strengthened the tool’s

credibility, while the integration of results into personalised care plans showed its practical utility.

However, the small sample size and potential bias in sampling, limit the generalisability and applicability of the findings. Similarly, the ambiguity in some questions may have oversimplified participants' experiences. Moving forward, refining the question phrasing and incorporating larger samples, will be critical in improving the tool's accuracy and effectiveness in clinical settings.

9.4.6 Qualitative Interviews with Thematic Analysis

This element of the research employed a qualitative methodology, primarily relying on semi-structured interviews and thematic analysis, to explore the screening tools results and its impact upon care planning in mental health services alongside its effects on therapeutic relationships, particularly for clients exhibiting alexithymia symptoms. The methodology's strength lies in its capacity to provide in-depth insights into complex, context-dependent experiences such as those related to mental health care planning, client-therapist rapport, and alexithymia.

One key advantage of using semi-structured interviews is the balance they provide between structure and flexibility. The predetermined questions ensured that the research objectives were covered, while the freedom to explore emergent topics allowed for a richer understanding of the participants' experiences. For instance, in this study, the semi-structured format allowed therapists to elaborate on their use of care planning and its implications for rapport building with clients who struggle with emotional processing. This flexibility enabled the exploration of unanticipated issues, such as therapists' varying interpretations of client

profiles based on the screening tool, revealing differences that would be difficult to capture through more rigid methods such as structured interviews.

However, a potential limitation of the semi-structured interview approach is the risk of interviewer bias. Because the interviewer had the flexibility to probe deeper into certain responses, there is the possibility that their own perspectives might have influenced the direction of the conversation. This could have resulted in certain themes being overemphasised while others may have been overlooked. To mitigate this, the researcher reflected on their potential biases and engaged in reflexive practice, through the inclusion of reflexivity questions during data familiarisation. Despite this, the inherent subjectivity in qualitative interviewing can challenge the consistency of data across different participants.

Thematic analysis, as employed in this study, is another strength as it allowed for a systematic approach to identifying and analysing patterns in the qualitative data, making the methodology particularly suitable for exploratory research. The structured six-step process, as outlined by Braun and Clarke (2006), ensured rigor in how the data was interpreted, and the development of thematic maps and the use of coding helped organise complex data, allowing for an in-depth examination of how therapists engage with care planning and alexithymia.

Yet, a challenge with thematic analysis lies in the potential for oversimplification when collapsing rich qualitative data into themes. Therefore, important subtleties may have been lost when participants' experiences were categorised, and key individual differences might have been overlooked. In this study, for example, while themes such as "Profile Congruence" and "Overcoming Challenges" were informative, they might not fully capture the individualised experiences of each therapist or their clients. Additionally, thematic analysis is

time-consuming and requires a high level of researcher interpretation, which can introduce subjective bias into the findings.

Moreover, while semi-structured interviews and thematic analysis are useful for exploring participants' lived experiences, the methodology in this study did not fully account for the potential influence of external factors, such as organisational constraints or cultural differences, which could have shaped the therapists' responses to care planning and alexithymia. Although these factors are mentioned, they are not integrated into the analysis in depth. Therefore, incorporating a more holistic approach, such as case study methods or triangulation with quantitative data, could have provided a fuller picture of the systemic factors impacting therapeutic outcomes.

In conclusion, the qualitative methodology used in this element of the research effectively allowed for an in-depth exploration of the subjective experiences of therapists working with clients who exhibit alexithymic traits. Its strength lies in the flexibility of the interviews and the systematic rigor of the thematic analysis. However, the potential for interviewer bias, the time-intensive nature of thematic analysis, and the exclusion of broader organisational or cultural factors limit the methodology's capacity to provide a completely comprehensive view of the research issue when considered in isolation. However, when considered holistically alongside the other studies, each element benefitted from integrating a mixed-method approach to address the research topic.

9.5 Dissemination of Key Findings

The dissemination of the findings from this research has been comprehensive, spanning academic, clinical, and governmental settings. The primary objective has been to ensure that

the insights gained, particularly regarding alexithymia, trauma, and emotional processing, are shared with both academic communities and practitioners who can implement these findings in real-world mental health care settings.

I have presented the findings at several academic conferences, including a shared conference with Keele University and the Research Innovation Conference at Staffordshire University. These events provided a platform to engage with other researchers and clinicians, fostering dialogue around the complexities of alexithymia and the potential of new screening tools to improve therapeutic outcomes. The feedback received at these conferences was overwhelmingly positive, encouraging further exploration and refinement of the research.

In addition to conference presentations, I have submitted two key components of the research, the scoping review and Smallest Space Analysis to peer-reviewed journals. Both submissions were well-received, with reviewers providing positive feedback and suggesting only minor revisions. These revisions have been made, and the papers have been re-submitted for publication consideration. The findings from chapter 5 (SSA) have now been published (see appendices). Further publication, of these studies from this thesis will further contribute to the growing body of literature on alexithymia and its relationship to trauma and emotional processing deficits.

My primary dissemination efforts have focused on clinical settings, where the findings can have the most immediate impact. I have conducted training sessions across several special schools and care homes in Staffordshire, Derbyshire and Cheshire presenting the research to clinical teams and equipping them with practical tools for identifying and working with clients who may struggle with emotional regulation due to alexithymia. In addition, I have

worked closely with several forensic settings, training staff on the link between alexithymia and other mental health concerns. This training is particularly relevant for forensic populations, where emotional processing difficulties are often under-recognised but play a significant role in behavioural and psychological issues.

Beyond the clinical and academic settings, my research has been incorporated into the curriculum for psychology undergraduates at Staffordshire University. It was featured as part of a module, where students were given the opportunity to explore the topic through essays and discussions, further promoting awareness and understanding of alexithymia among future psychologists.

Lastly, a significant aspect of my dissemination work has been in collaboration with the late Dr. Noreen Oliver MBE, whose support was instrumental in advancing my research. This collaboration has led to discussions at government level, with the potential for my findings to inform policy decisions related to mental health care. These discussions represent a meaningful step towards ensuring that alexithymia and its implications for mental health treatment are considered at the highest levels of policymaking.

Through these various avenues, the dissemination of my research has contributed not only to academic knowledge but also to practical changes in mental health care, with the potential to impact broader mental health policies in the future.

9.5 Future Research

The research carried out to date has already shown that the newly developed screening tool for alexithymia is a promising step in identifying individuals who experience emotional

processing difficulties. However, further research is needed to validate the tool across larger, more diverse populations. Therefore, future research directions could include conducting large-scale, cross-cultural validation studies to confirm the tool's reliability and validity in different demographic settings. Expanding its application to non-clinical populations and comparing its effectiveness across clinical and community-based environments could also provide valuable insights.

One of the key findings in the research is that alexithymia may exist on a spectrum, with certain individuals exhibiting traits but not meeting the full criteria for the condition. The study identified distinct profiles, such as The Compromised Child and The Compromised Adult, that suggest varying levels of alexithymia severity. Consequently, further exploration is required to investigate the extent to which alexithymia manifests in individuals with varying levels of trauma and emotional development. Longitudinal studies may be best placed to observe the progression of alexithymia over time, focusing on how early interventions might alter emotional outcomes for individuals on different parts of the spectrum.

The research also highlighted the strong relationship between early trauma and alexithymia, particularly in how trauma impacts emotional regulation. However, a more detailed understanding of this relationship is needed, especially in determining whether trauma directly leads to the development of alexithymia. Again, longitudinal studies tracking individuals from childhood to adulthood could help disentangle the causal relationships between trauma, alexithymia, and emotional processing deficits, alongside further examination of how different types of trauma, for example, emotional neglect versus physical abuse, affect alexithymia might enhance current knowledge.

The practical applications of the research indicate that early identification of alexithymia through screening tools could significantly improve therapeutic outcomes. However, there remains a gap in understanding the long-term effectiveness of early interventions. Future studies should aim to assess the impact of early intervention programs that use screening tools for alexithymia in different settings, such as schools, primary care, and mental health clinics. Evaluating whether early interventions prevent the full development of alexithymia, particularly in at-risk children, would be highly valuable.

A gap in the current findings is the lack of cross-cultural studies, limiting the ability to generalise findings across different populations. Cultural differences in emotional expression and regulation may influence the prevalence and manifestation of alexithymia. Therefore, future studies should explore how cultural and socio-demographic variables affect the development and presentation of alexithymia. Incorporating these factors could lead to a deeper understanding of the condition and help tailor interventions to specific cultural groups.

The use of mixed-methods approach, combining qualitative and quantitative techniques, has provided a robust foundation for understanding the complexities of alexithymia. However, there remains room for improvement in how these methods can be further integrated to gain more comprehensive insights. Continued refinement of mixed-methods designs is needed, particularly in exploring how narrative approaches and quantitative tools like the Smallest Space Analysis can complement each other. Future research could focus on developing more integrated methodologies that balance the richness of narrative data with the rigor of quantitative analysis.

One suggestion from the current findings was the potential inclusion of non-alexithymic profiles in future studies, which could help identify emotional processing difficulties unrelated to alexithymia. Further studies may therefore wish to include the non-Alexithymic profiles found such as The Warrior and The Nurtured child to investigate emotional profiles in individuals who do not exhibit Alexithymic traits but who may still experience emotional processing challenges. These profiles could provide insights into alternative therapeutic approaches and expand the applicability of the screening tool beyond alexithymia.

These recommendations holistically provide a pathway for future research to enhance understanding of alexithymia, its relationship with trauma, and its implications for therapeutic practice. Each direction builds upon the foundations established in the current research, offering the potential to contribute further to the field of psychology.

9.6 Contribution to Knowledge

The body of research undertaken for the current thesis contributes significantly to psychological knowledge in several key areas, particularly in the understanding of alexithymia, trauma, emotional processing, and the development and application of clinical tools in mental health care settings. The integration of both qualitative and quantitative approaches across different studies, offers a multi-dimensional understanding of these complex psychological constructs, while also providing practical implications for therapeutic interventions.

One of the significant contributions of the research is the advancement of knowledge on the co-occurrence of alexithymia and trauma. Through the application of the Smallest Space Analysis (SSA), distinct profiles were identified, such as The Compromised Child, The Compromised Adult, and The Alexithymic, that highlight the differential impact of early

trauma on emotional processing. This evidences how trauma can elevate certain aspects of alexithymia but not others, contributing to the growing literature on the diverse ways that trauma manifests in emotional regulation difficulties.

The identification of these profiles has important theoretical implications as the findings support existing psychological theories on trauma and emotional suppression, while also offering new insights into how certain individuals may experience trauma without developing Alexithymic traits. This unique understanding can help clinicians tailor their therapeutic approaches based on specific trauma experiences, enhancing the precision of psychological care for clients with trauma-related alexithymia.

Another significant contribution of the research is the development and testing of a screening tool for alexithymia. This tool was designed to categorise individuals into specific profiles based on their life experiences and emotional capacities. The integration of the screening tool into care plans not only demonstrated its real-world utility but also highlighted the importance of early identification in treatment outcomes. The high interrater reliability and the practical application of this tool in a therapeutic setting marked a significant step forward in the practical management of alexithymia.

The use of exploratory factor analysis (EFA) and binomial logistic regression added further rigor to the development of this screening tool. By identifying latent factors underlying alexithymia and assessing the predictive power of specific life experiences on emotional processing deficits, which provided a solid empirical foundation for its use in clinical practice. This has broader implications for improving the accuracy of mental health assessments, particularly in populations with co-occurring trauma and substance use issues.

A strength of the research is its combination of qualitative and quantitative methodologies, which offers a more comprehensive view of alexithymia and its implications. Thematic analysis of semi-structured interviews provided rich, detailed insights into the subjective experiences of therapists and clients, illuminating the ways in which care planning can either strengthen or hinder therapeutic relationships. This qualitative exploration complemented the quantitative findings, offering depth to the patterns revealed through statistical models like SSA and regression analysis.

By merging these methodologies, the research contributes to the growing body of work that emphasises the need for integrated approaches in psychology. The mixed-methods approach helped to triangulate data from multiple perspectives, offering a fuller understanding of how psychological phenomena like alexithymia and trauma impact individuals' lives both in and out of therapy. This contributes to an evolving understanding in psychology that complex conditions require equally unique methodological approaches.

Beyond theoretical contributions, the research offers significant practical insights for mental health services, particularly in the areas of trauma-informed care and emotional literacy. The studies emphasise the importance of personalised interventions, as seen in the integration of the screening tool into care plans and the exploration of how therapists use care planning to support clients with alexithymia. By showcasing the limitations of self-report measures in this population and highlighting the need for objective, behaviour-based assessments, the work encourages clinicians to refine their practices to better serve clients with emotional processing difficulties.

Additionally, the work undertaken underscores the importance of therapist training in recognising alexithymia, particularly in populations with trauma or substance abuse histories. The unique understanding of how alexithymia impacts therapeutic relationships can guide the development of more effective therapist-client interactions, ultimately improving mental health outcomes for these populations.

The research also expands the clinical understanding of alexithymia, particularly in populations dealing with substance abuse and co-occurring mental health issues. By identifying predictive variables and analysing how alexithymia manifests in clients with different life experiences, the studies contribute to a more differentiated understanding of this condition, ultimately contributing to a growing body of evidence that supports the need for specialised interventions for individuals with alexithymia, as traditional therapeutic approaches may not be as effective for this population.

The identification of specific clusters within the alexithymic population also advances clinical knowledge by providing a framework for more precise, tailored interventions. This research suggests that alexithymia is not a one-size-fits-all condition, but rather a spectrum of emotional processing deficits that require an individualised and a unique approach to treatment.

Holistically, the research offers a multi-layered contribution to the field of psychology. By examining alexithymia and trauma through various methodological lenses using a mixed-methods approach, the research has enhanced the understanding of how various conditions and life experiences intersect with emotional processing difficulties. Consequently, the holistic body of work not only advances psychological theory, but also provides practical

tools and recommendations for improving mental health assessments and therapeutic interventions. Through this integration of theory and practice, the research significantly contributes to the ongoing efforts in psychology to better understand and treat complex emotional and trauma-related disorders.

9.7 Personal Reflections of the Author

Embarking on this research journey has been a deeply transformative experience, both academically and personally. Throughout the process of investigating alexithymia, trauma, and emotional processing, I have developed a greater understanding of the complexities involved in human emotion and its manifestation in psychological conditions. This work has not only expanded my knowledge of psychological theories but has also shaped my perspectives on therapeutic practices and the importance of tailored mental health interventions.

One of the most significant challenges I faced was navigating the intricacies of combining qualitative and quantitative methodologies. At the outset of this research, I had a strong foundation in qualitative methods, particularly in thematic analysis and semi-structured interviews. However, integrating more quantitative techniques such as Smallest Space Analysis (SSA), Exploratory Factor Analysis (EFA), and binomial logistic regression introduced me to new dimensions of statistical analysis that were initially outside of my comfort zone. Learning to balance these methods to produce a holistic understanding of the data was both demanding and rewarding. This methodological integration has not only broadened my skill set but also reinforced my belief in the value of mixed-methods research in psychological inquiry.

Another key learning point for me has been the recognition of the limitations inherent in self-report measures, particularly when working with individuals who struggle with emotional awareness, such as those with alexithymia. As I delved deeper into the challenges faced by this population, it became evident that traditional assessment tools might not always capture the full scope of emotional processing difficulties. This realisation pushed me to think critically about the development of more innovative and objective tools, leading to the creation and refinement of the screening tool used in this research. Witnessing the positive reception of this tool in therapeutic settings has been incredibly gratifying, as it underscores the practical impact that research can have on real-world mental health care.

The process of conducting interviews with therapists also had a profound effect on me. Hearing their first-hand experiences of working with clients who exhibit emotional processing difficulties illuminated the importance of empathy, patience, and adaptability in therapy. Their insights into how care planning can either enhance or hinder therapeutic relationships highlighted the human element of psychological care, which is often overlooked in more clinical or theoretical discussions. These conversations reaffirmed my commitment to research that not only advances psychological theory but also has tangible benefits for mental health practitioners and their clients.

Throughout this research, I have been struck by the deeply personal nature of trauma and emotional regulation. Understanding how early life experiences shape one's ability to process emotions has given me a renewed appreciation for the resilience of individuals who face these challenges. This realisation has also fostered a sense of responsibility within me to continue exploring how therapeutic interventions can be tailored to meet the unique needs of

each individual. Moving forward, I am motivated to further refine the tools and insights developed through this research to ensure they are as inclusive and effective as possible.

Finally, this research journey has underscored the importance of reflection and reflexivity in academic work. As I engaged with the data, particularly in the qualitative components, I found myself continuously reflecting on my own biases, assumptions, and experiences. This process of self-awareness has been crucial in ensuring that I approached the research with an open mind, allowing the data to speak for itself rather than imposing my preconceived ideas onto it. This personal growth, coupled with the academic rigor demanded by the research, has made this journey a deeply fulfilling one.

In conclusion, conducting this research has not only enhanced my academic knowledge but also deepened my understanding of the human experience, particularly in relation to trauma, emotion, and therapy. I leave this project with a sense of accomplishment, knowing that the findings have the potential to improve mental health care practices. Moreover, I am filled with a sense of curiosity and excitement for the future research that lies ahead, as I continue to explore and contribute to the ever-evolving field of psychology.

9.8 Overall Conclusion

The body of work presented in this thesis contributes significantly to our understanding of alexithymia, emotional processing, and trauma within clinical and non-clinical populations. Through the use of diverse methodological approaches ranging from Smallest Space Analysis (SSA), Exploratory Factor Analysis (EFA), and binomial logistic regression to qualitative methods such as semi-structured interviews and thematic analysis, the research presented

offers a multi-faceted view of how emotional deficits and trauma manifest in both individual and therapeutic contexts.

Across the different studies conducted, several key findings contribute to both the theoretical understanding of alexithymia and its practical implications for clinical intervention. Firstly, the research reinforces the strong link between early trauma and Alexithymic traits, particularly highlighting how specific types of trauma, such as emotional neglect and physical abuse, elevate emotional processing deficits. However, the findings also suggest that not all individuals exposed to trauma develop alexithymia, with some demonstrating resilience or alternative coping mechanisms. This underscores the need for trauma-informed care that considers individual differences in emotional regulation.

One of the most practical contributions of this research is the development of a screening tool that categorises individuals into different emotional processing profiles, such as The Compromised Child, The Compromised Adult, and The Alexithymic. The tool has proven effective in helping clinicians tailor their therapeutic interventions, particularly for individuals with significant emotional deficits. The tool's high interrater reliability and integration into personalised care plans further underscore its utility in clinical practice.

The identification of different profiles not only deepens the understanding of alexithymia as a spectrum condition but also highlights the diverse ways in which emotional processing difficulties impact therapeutic relationships. Clients who struggle to identify or express emotions, for example, may experience fractured therapeutic alliances, which can impede their progress in treatment. This finding points to the need for therapists to develop specific strategies when working with emotionally distant clients.

The integration of quantitative and qualitative methodologies across these studies demonstrates the value of mixed methods approaches in psychological research. The use of statistical techniques, such as SSA and EFA, provided robust, generalisable findings, while the qualitative interviews offered rich, nuanced insights into the lived experiences of both therapists and clients. Together, these methods allowed for a comprehensive understanding of alexithymia and trauma, showing that complex psychological phenomena require multi-dimensional approaches.

A key contribution of this research is its focus on improving therapeutic practices for individuals with alexithymia. By developing and testing a screening tool, and by exploring therapist-client dynamics, this research has practical implications for enhancing client engagement and improving emotional literacy. The findings underscore the need for early identification of alexithymia and trauma in clinical settings, ensuring that interventions are timely and tailored to individual needs.

The findings from this thesis have important implications for clinical practice, particularly in the areas of trauma-informed care and emotional regulation. The development of a narrative-based screening tool provides clinicians with a practical instrument for assessing emotional processing deficits early in the therapeutic process. Furthermore, by highlighting the importance of individualised care planning, this research advocates for more adaptive and flexible therapeutic approaches, especially for clients who may struggle with emotional awareness and articulation. Additionally, the identification of distinct emotional profiles suggests that therapists must be aware of the diversity of emotional processing difficulties among their clients. Strategies that account for Alexithymic traits, such as structured

interventions that bypass traditional emotional exploration, may be particularly effective in helping clients engage with therapy more meaningfully.

Holistically, this thesis advances psychological knowledge in several ways. It expands the theoretical understanding of alexithymia by positioning it as a condition that exists along a spectrum, influenced by both early life experiences and individual emotional capacities. It also introduces new frameworks for understanding the interplay between trauma and emotional deficits, offering fresh perspectives on how these factors co-occur and impact mental health.

The research also makes a significant practical contribution by providing clinicians with a validated screening tool that can inform care planning and intervention strategies. The tool, along with the accompanying insights into therapist-client relationships, fills an important gap in the existing literature by offering a structured yet adaptable approach to working with emotionally distant clients. However, despite its contributions, this research is not without limitations. The sample sizes in some of the studies, particularly those involving the narrative-based screening tool, were relatively small, which may limit the generalisability of the findings. Future research should aim to validate the screening tool across larger and more diverse populations, and explore the use of alternative, objective measures of emotional processing. Moreover, expanding the research to incorporate cross-cultural perspectives would provide a more global understanding of how alexithymia manifests in different cultural contexts.

In conclusion, this thesis makes a substantial contribution to the understanding of alexithymia and its relationship with trauma and emotional processing deficits. Through the development

of a screening tool, the identification of emotional profiles, and the exploration of therapeutic practices, this research offers both theoretical insights and practical tools for improving mental health care. By advancing the field's understanding of how emotional deficits manifest and impact therapy, this work paves the way for future research that will continue to refine diagnostic and therapeutic interventions for emotionally distant clients.

References

- Ahmed, A. O., Richardson, J., Buckner, A., Romanoff, S., Feder, M., Oragunye, N., Ilnicki, A., Bhat, I., Hoptman, M. J., & Lindenmayer, J.-P. (2018). Do cognitive deficits predict negative emotionality and aggression in schizophrenia? *Psychiatry Research*, *259*, 350–357.
- Aleman, K. (2007). Four problems with psychodynamic assessment of drug abusers. *Nordic Psychology*, *59*(4), 303–316.
- Anagnostou, E., Soorya, L., Brian, J., Dupuis, A., Mankad, D., Smile, S., & Jacob, S. (2014). Intranasal oxytocin in the treatment of autism spectrum disorders: a review of literature and early safety and efficacy data in youth. *Brain research*, *1580*, 188-198.
- Anuk, D., & Bahadır, G. (2018). The association of experience of violence and somatization, depression, and alexithymia: A sample of women with medically unexplained symptoms in Turkey. *Archives of Women's Mental Health*, *21*(1), 93–103.
- Arksey, H., and L. O'Malley. 2005. "Scoping Studies: Towards a Methodological Framework." *International Journal of Social Research Methodology* *8* (1): 19–32.
- Arman, S., Salimi, H., & Maracy, M. R. (2018). Parenting styles and psychiatric disorders in children of bipolar parents. *Advanced Biomedical Research*, *7*. doi:
- Armstrong, T., & Olatunji, B. (2009). PTSD in the media: A critical analysis of the portrayal of controversial issues. *Scientific Review of Mental Health Practice*, *7*(1).
- Aust, S., Alkan Härtwig, E., Koelsch, S., Heekeren, H. R., Heuser, I., & Bajbouj, M. (2014). How emotional abilities modulate the influence of early life stress on hippocampal functioning. *Social Cognitive and Affective Neuroscience*, *9*(7), 1038–1045.
- Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia Scale— I. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, *38*(1), 23–32. [https://doi.org/10.1016/0022-3999\(94\)90005-1](https://doi.org/10.1016/0022-3999(94)90005-1)

- Bagby, R. M., Taylor, G. J., & Parker, J. D. (1994). The twenty-item Toronto Alexithymia Scale—II. Convergent, discriminant, and concurrent validity. *Journal of psychosomatic research*, 38(1), 33-40.
- Bagby, R. M., & Taylor, G. J. (1997). Affect dysregulation and alexithymia. *Disorders of affect regulation: Alexithymia in medical and psychiatric illness*, 26-45.
- Baikie, K. A. (2008). Who does expressive writing work for? Examination of alexithymia, splitting, and repressive coping style as moderators of the expressive writing paradigm. *British Journal of Health Psychology*, 13(1), 61–66.
- Bakan, A. B., Aslan, G., & Aka, P. (2020). An investigation of the effect of the psychoeducation program provided to alexithymic and violent adolescents on the level of alexithymia. *Journal of Child and Adolescent Psychiatric Nursing: Official Publication of the Association of Child and Adolescent Psychiatric Nurses, Inc*, 33(3), 169–179.
- Barahmand, U., Khazaei, A., & Hashjin, G. S. (2016). Emotion Dysregulation Mediates Between Childhood Emotional Abuse and Motives for Substance Use. *Archives of Psychiatric Nursing*, 30(6), 653–659.
- Battista, F., Lanciano, T., & Curci, A. (2021). Does Alexithymia Affect Memory for a Crime? The Relationship Between Alexithymia, Executive Functions, and Memories. *Frontiers in Psychology*, 12, 669778.
- Bauermann, T. M., Parker, J. D. A., & Taylor, G. J. (2008). Sleep problems and sleep hygiene in young adults with alexithymia. *Personality and Individual Differences*, 45(4), 318–322.
- Bedi, R., Muller, R. T., & Classen, C. C. (2014). Cumulative risk for deliberate self-harm among treatment-seeking women with histories of childhood abuse. *Psychological Trauma: Theory, Research, Practice, and Policy*, 6(6), 600–609.

- Bekker, M., Bachrach, N., & Croon, M. (2007). The relationships of antisocial behavior with attachment styles, autonomy-connectedness, and alexithymia. *Journal of Clinical Psychology, 63*(6), 507-527
- Bell, K. M., & Naugle, A. E. (2008). The role of emotion recognition skills in adult sexual revictimization. *The Journal of Behavior Analysis of Offender and Victim Treatment and Prevention, 1*(4), 93–118.
- Benzies, K. M., Premji, S., Hayden, K. A., & Serrett, K. (2006). State-of-the-evidence reviews: advantages and challenges of including grey literature. *Worldviews on Evidence-Based Nursing, 3*(2), 55-61.
- Berenbaum, H. (1996). Childhood abuse, alexithymia and personality disorder. *Journal of Psychosomatic Research, 41*(6), 585–595.
- Berenbaum, H., Valera, E. M., & Kerns, J. G. (2003). Psychological Trauma and Schizotypal Symptoms. *Schizophrenia Bulletin, 29*(1), 143–152.
- Berenbaum, H. (1996). Childhood abuse, alexithymia and personality disorder. *Journal of Psychosomatic Research, 41*(6), 585–595.
- Berenson, K. R., Dochat, C., Martin, C. G., Yang, X., Rafaeli, E., & Downey, G. (2018). Identification of mental states and interpersonal functioning in borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment, 9*(2), 172–181.
- Berger, S., Elliott, C., Ranzenhofer, L., Shomaker, L., Hannallah, L., Field, S., Young, J., Sbrocco, T., Wilfley, D., Yanovski, J., & et al. (2014). Interpersonal problem areas and alexithymia in adolescent girls with loss of control eating. *Comprehensive Psychiatry, 55*(1), 170-178.
- Berger, S., Elliott, C., Ranzenhofer, L., Shomaker, L., Hannallah, L., Field, S., Young, J., Sbrocco, T., Wilfley, D., Yanovski, J., & et al. (2014). Interpersonal problem areas and alexithymia in adolescent girls with loss of control eating. *Comprehensive Psychiatry, 55*(1), 170-178.

- Bergmans, Y., Guimond, T., Lambert, C., McInerney, S., & O'Brien, K. (2021). Alexithymia in people with recurrent suicide attempts: A niche area for targeted treatment. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 42(6), 425–433.
- Berke, D. S., Macdonald, A., Poole, G. M., Portnoy, G. A., McSheffrey, S., Creech, S. K., & Taft, C. T. (2017). Optimizing trauma-informed intervention for intimate partner violence in veterans: The role of alexithymia. *Behaviour Research and Therapy*, 97, 222–229.
- Berthoz, S., Perdereau, F., Godart, N., Corcos, M., & Haviland, M. G. (2007). Observer- and self-rated alexithymia in eating disorder patients: Levels and correspondence among three measures. *Journal of Psychosomatic Research*, 62(3), 341–347.
- Bianchini, V., Cofini, V., Curto, M., Lagrotteria, B., Manzi, A., Navari, S., Ortenzi, R., Paoletti, G., Pompili, E., Pompili, P., & et al. (2019). Dialectical behaviour therapy (DBT) for forensic psychiatric patients: An Italian pilot study. *Criminal Behaviour and Mental Health*.
- Bibby, P. A. (2016). Loss-Chasing, Alexithymia, and Impulsivity in a Gambling Task: Alexithymia as a Precursor to Loss-Chasing Behavior When Gambling. *Frontiers in Psychology*, 7, 3.
- Boisjoli, C., & Hébert, M. (2020). Importance of telling the unutterable: Alexithymia among sexually abused children. *Psychiatry Research*, 291, 113238.
- Borg, I., & Lingoes, J. (2012). *Multidimensional similarity structure analysis*. Springer Science & Business Media.
- Brady, R. E., Bujarski, S. J., Feldner, M. T., & Pyne, J. M. (2017). Examining the effects of alexithymia on the relation between posttraumatic stress disorder and over-reporting. *Psychological Trauma: Theory, Research, Practice, and Policy*, 9(1), 80–87.
- Brown, S., Fite, P. J., Stone, K., & Bortolato, M. (2016). Accounting for the associations between child maltreatment and internalizing problems: The role of alexithymia. *Child Abuse & Neglect*, 52, 20–28.

- Brown, S., Fite, P. J., Stone, K., Richey, A., & Bortolato, M. (2018). Associations between emotional abuse and neglect and dimensions of alexithymia: The moderating role of sex. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(3), 300–308.
- Bruce, G., Curren, C., & Williams, L. (2012). Alexithymia and alcohol consumption: The mediating effects of drinking motives. *Addictive Behaviors*, 37(3), 350–352.
- Bujarski, S. J., Klanecky, A. K., & McChargue, D. E. (2010). The relationship between alexithymia and alcohol-related risk perceptions: The moderating effect of general trauma in a college population. *Addictive Behaviors*, 35(4), 363–366.
- Byrne, G., Bogue, J., Egan, R., & Lonergan, E. (2016). 'Identifying and Describing Emotions': Measuring the Effectiveness of a Brief, Alexithymia-Specific, Intervention for a Sex Offender Population. *Sexual Abuse: A Journal of Research and Treatment*, 28(7), 599–619.
- Campanella, S., Falbo, L., Rossignol, M., Grynberg, D., Balconi, M., Verbanck, P., & Maurage, P. (2012). Sex differences on emotional processing are modulated by subclinical levels of alexithymia and depression: A preliminary assessment using event-related potentials. *Psychiatry Research*, 197(1–2), 145–153.
- Canter, D. (1994). *Criminal shadows*. London: Harper Collins.
- Canter, D., & Youngs, D. (2009). *Investigative psychology: Offender profiling and the analysis of criminal action*. Chichester: Wiley.
- Carpenter, L., & Chung, M. C. (2011). Childhood trauma in obsessive compulsive disorder: The roles of alexithymia and attachment. *Psychology and Psychotherapy*, 84(4), 367–388.
- Cecero, J., & Holmstrom, R. (1998) Alexithymia and affect pathology among adult male alcoholics. *Journal of Clinical Psychology*, 53 (3), 201-208.
- Celikel, F. C., Kose, S., Erkorkmaz, U., Sayar, K., Cumurcu, B. E., & Cloninger, C. R. (2010). Alexithymia and temperament and character model of personality in patients with major depressive disorder. *Comprehensive Psychiatry*, 51(1), 64–70.

- Chan, S. (2009). Loneliness, interpersonal distrust, and alexithymia in university students. *Journal of Applied Social Psychology*, 39(4), 811–828. <https://doi.org/10.1111/j.1559-1816.2009.00491.x>
- Chen, L., Ngoubene-Atioky, A. J., Zanardelli, G., Yuanping, D., & Yu, L. (2020). Childhood Abuse and Suicidal Behaviors Among Chinese Migrant Workers: The Mediating Role of Alexithymia and Social Support. *Archives of Suicide Research: Official Journal of the International Academy for Suicide Research*, 24(4), 633–647.
- Chung, M. C., Di, X., & Wan, K. H. (2016a). Past trauma, alexithymia, and posttraumatic stress among perpetrators of violent crime. *Traumatology*, 22(2), 104–112.
- Chung, M. C., Di, X., & Wan, K. H. (2016b). Exploring the interrelationship between alexithymia, defense style, emotional suppression, homicide-related posttraumatic stress disorder and psychiatric co-morbidity. *Psychiatry Research*, 243, 373–381.
- Chung, M. C., & Chen, Z. S. (2020). Gender Differences in Child Abuse, Emotional Processing Difficulties, Alexithymia, Psychological Symptoms and Behavioural Problems among Chinese Adolescents. *The Psychiatric Quarterly*, 91(2), 321–332.
- Chung, M. C., & Chen, Z. S. (2021). The Interrelationship Between Child Abuse, Emotional Processing Difficulties, Alexithymia And Psychological Symptoms Among Chinese Adolescents. *Journal of Trauma & Dissociation: The Official Journal of the International Society for the Study of Dissociation (ISSD)*, 22(1), 107–121.
- Cicero, J & Holmstron, R (1998). Alexithymia and affect pathology among adult male alcoholics. *Journal of Clinical Psychology*—Wiley Online Library. (n.d.). Retrieved 3 November 2021, from .
- Cimbora, D. M., & McIntosh, D. N. (2003). Emotional responses to antisocial acts in adolescent males with conduct disorder: A link to affective morality. *Journal of Clinical Child and*

Adolescent Psychology: The Official Journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53, 32(2), 296–301.

- Clark, G. T., & Ram, S. (2007). Four oral motor disorders: Bruxism, dystonia, dyskinesia and drug-induced dystonic extrapyramidal reactions. *Dental Clinics of North America*, 51(1), 225–243.
- Cleland, C., Magura, S., Foote, J., Rosenblum, A., & Kosanke, N. (2005). Psychometric properties of the Toronto Alexithymia Scale (TAS-20) for substance users. *Journal of Psychosomatic Research*, 58(3), 299–306.
- Conrad, R., Wegener, I., Imbierowicz, K., Liedtke, R., & Geiser, F. (2009). Alexithymia, temperament and character as predictors of psychopathology in patients with major depression. *Psychiatry Research*, 165(1–2), 137–144.
- Coriale, G., Bilotta, E., Leone, L., Cosimi, F., Porrari, R., De Rosa, F., & Ceccanti, M. (2012). Avoidance coping strategies, alexithymia and alcohol abuse: A mediation analysis. *Addictive Behaviors*, 37(11), 1224–1229.
- Craparo, G., David, V., Costanzo, G., & Gori, A. (2018). Cosa Nostra and the Camorra: Assessment of personality, alexithymic traits, and attachment styles. *International Journal of Law & Psychiatry*, 58, 17–26.
- Craparo, G. (2011). Internet addiction, dissociation, and alexithymia. *Procedia - Social and Behavioral Sciences*, 30, 1051–1056.
- Dabkowska, M. (2007). [Relationships between the emotional and cognitive components of alexythymia and PTSD in victims of domestic violence]. *Psychiatria Polska*, 41(6), 851–862.
- Davis, S. and Ioannou, M., (2022). "I felt like a robot": A retrospective study differentiating Life Course Persistent Offenders within a Substance Misuse Cohort. RGUK.
https://www.rguk.org/_files/ugd/ff2c54_dd6eb136a5464301abbf31b283becade.pdf
- De Berardis, D., Carano, A., Gambi, F., Campanella, D., Giannetti, P., Ceci, A., Mancini, E., La Rovere, R., Cicconetti, A., Penna, L., Di Matteo, D., Scorrano, B., Cotellessa, C., Salerno, R.

- M., Serroni, N., & Ferro, F. M. (2007). Alexithymia and its relationships with body checking and body image in a non-clinical female sample. *Eating Behaviors*, 8(3), 296–304.
- De Berardis, D., Serroni, N., Campanella, D., Carano, A., Gambi, F., Valchera, A., Conti, C., Sepede, G., Scali, M., Fulcheri, M., Salerno, R. M., & Ferro, F. M. (2008). Alexithymia and its relationships with C-reactive protein and serum lipid levels among drug naïve adult outpatients with major depression. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 32(8), 1982–1986.
- De Gennaro, L., Martina, M., Curcio, G., & Ferrara, M. (2004). The relationship between alexithymia, depression, and sleep complaints. *Psychiatry Research*, 128(3), 253–258.
- de Haan, H., Joosten, E., Wijdeveld, T., Boswinkel, P., van der Palen, J., & De Jong, C. (2012). Alexithymia is not a stable personality trait in patients with substance use disorders. *Psychiatry Research*, 198(1), 123-129.
- De Rick, A., & Vanheule, S. (2007). Alexithymia and DSM-IV personality disorder traits in alcoholic inpatients: A study of the relation between both constructs. *Personality and Individual Differences*, 43(1), 119–129.
- de Timary, P., Roy, E., Luminet, O., Fillée, C., & Mikolajczak, M. (2008). Relationship between alexithymia, alexithymia factors and salivary cortisol in men exposed to a social stress test. *Psychoneuroendocrinology*, 33(8), 1160–1164.
- de Timary, P., Luts, A., Hers, D., & Luminet, O. (2008). Absolute and relative stability of alexithymia in alcoholic inpatients undergoing alcohol withdrawal: Relationship to depression and anxiety. *Psychiatry Research*, 157(1–3), 105–113.
- Di Schiena, R., Luminet, O., & Philippot, P. (2011). Adaptive and maladaptive rumination in alexithymia and their relation with depressive symptoms. *Personality and Individual Differences*, 50(1), 10–14.

- Dorard, G., Berthoz, S., Haviland, M. G., Phan, O., Corcos, M., & Bungener, C. (2008). Multimethod alexithymia assessment in adolescents and young adults with a cannabis use disorder. *Comprehensive Psychiatry*, 49(6), 585–592.
- Duddu, V., Isaac, M. K., & Chaturvedi, S. K. (2003). Alexithymia in somatoform and depressive disorders. *Journal of Psychosomatic Research*, 54(5), 435–438.
- Edel, M.-A., Edel, S., Kruger, M., Assion, H.-J., Juckel, G., & Brune, M. (2015). Attachment, recalled parental rearing, and ADHD symptoms predict emotion processing and alexithymia in adults with ADHD. *Annals of General Psychiatry*, 14(1) (no pagination).
- Edwards, E. R. (2019). Posttraumatic stress and alexithymia: A meta-analysis of presentation and severity. *Psychological Trauma: Theory, Research, Practice, and Policy*, No Pagination Specified-No Pagination Specified.
- Elzinga, B. M., Bermond, B., & van Dyck, R. (2002). The relationship between dissociative proneness and alexithymia. *Psychotherapy and Psychosomatics*, 71(2), 104–111.
- Engelstad, K. N., Rund, B. R., Torgalsbøen, A.-K., Lau, B., Ueland, T., & Vaskinn, A. (2019). Large social cognitive impairments characterize homicide offenders with schizophrenia. *Psychiatry Research*, 272, 209–215.
- Engelstad, K. N., Rund, B. R., Torgalsbøen, A.-K., Lau, B., Ueland, T., & Vaskinn, A. (2019). Large social cognitive impairments characterize homicide offenders with schizophrenia. *Psychiatry Research*, 272, 209–215.
- Evren, C., & Evren, B. (2005). Self-mutilation in substance-dependent patients and relationship with childhood abuse and neglect, alexithymia and temperament and character dimensions of personality. *Drug and Alcohol Dependence*, 80(1), 15–22.
- Evren, C., Dalbudak, E., Cetin, R., Durkaya, M., & Evren, B. (2010). Relationship of alexithymia and temperament and character dimensions with lifetime post-traumatic stress disorder in male alcohol-dependent inpatients. *Psychiatry and Clinical Neurosciences*, 64(2), 111–119.

- Evren, C., & Evren, B. (2006). The relationship of suicide attempt history with childhood abuse and neglect, alexithymia and temperament and character dimensions of personality in substance dependents. *Nordic Journal of Psychiatry*, 60(4), 263–269.
- Farrington, D. P. (2005). Childhood origins of antisocial behavior. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice*, 12(3), 177-190.
- Fenwick, A. S., & Sullivan, K. A. (2011). Potential link between body dysmorphic disorder symptoms and alexithymia in an eating-disordered treatment-seeking sample. *Psychiatry Research*, 189(2), 299–304.
- Forrest, L. N., Smith, A. R., White, R. D., & Joiner, T. E. (2015). (Dis)connected: An examination of interoception in individuals with suicidality. *Journal of Abnormal Psychology*, 124(3), 754–763.
- Frewen, P. A., Dozois, D. J. A., Neufeld, R. W. J., & Lanius, R. A. (2012). Disturbances of emotional awareness and expression in posttraumatic stress disorder: Meta-mood, emotion regulation, mindfulness, and interference of emotional expressiveness. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(2), 152–161.
- Frewen, P. A., Dozois, D. J. A., Neufeld, R. W. J., & Lanius, R. A. (2008). Meta-analysis of alexithymia in posttraumatic stress disorder. *Journal of Traumatic Stress*, 21(2), 243–246.
- Frewen, P. A. (2006). Alexithymia in PTSD: Psychometric and FMRI Studies. *Annals of the New York Academy of Sciences*, 1071(1), 397–400.
- Friedman, S. R., Rapport, L. J., Lumley, M., Tzelepis, A., VanVoorhis, A., Stettner, L., & Kakaati, L. (2003). Aspects of social and emotional competence in adult attention-deficit/hyperactivity disorder. *Neuropsychology*, 17(1), 50–58.
- Fukunishi, I., Sasaki, K., Chishima, Y., Anze, M., & Saijo, M. (1996). Emotional disturbances in trauma patients during the rehabilitation phase. *General Hospital Psychiatry*, 18(2), 121–127.

- Fukunishi, I., & Rahe, R. H. (1995). Alexithymia and Coping with Stress in Healthy Persons: Alexithymia as a Personality Trait is Associated with Low Social Support and Poor Responses to Stress. *Psychological Reports*, 76(3_suppl), 1299–1304.
<https://doi.org/10.2466/pr0.1995.76.3c.1299>
- Gaher, R. M., Arens, A. M., & Shishido, H. (2015). Alexithymia as a Mediator Between Childhood Maltreatment and Impulsivity. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 31(4), 274–280.
- Gaher, R. M., O'Brien, C., Smiley, P., & Hahn, A. M. (2016). Alexithymia, Coping Styles and Traumatic Stress Symptoms in a Sample of Veterans Who Experienced Military Sexual Trauma. *Stress & Health: Journal of the International Society for the Investigation of Stress*, 32(1), 55–62.
- García-Sancho, E., Salguero, J. M., & Fernández-Berrocal, P. (2014). Relationship between emotional intelligence and aggression: A systematic review. *Aggression and Violent Behavior*, 19(5), 584–591.
- Garisch, J. A., & Wilson, M. S. (2010). Vulnerabilities to deliberate self-harm among adolescents: The role of alexithymia and victimization. *British Journal of Clinical Psychology*, 49(2), 151–162.
- Garofalo, C., Velotti, P., & Zavattini, G. C. (2018). Emotion regulation and aggression: The incremental contribution of alexithymia, impulsivity, and emotion dysregulation facets. *Psychology of Violence*, 8(4), 470–483.
- Gearon, J. S., Bellack, A. S., Rachbeisel, J., & Dixon, L. (2001). Drug-use behavior and correlates in people with schizophrenia. *Addictive Behaviors*, 26(1), 51–61.
- Gelman, A., & Hill, J. (2006). *Data analysis using regression and multilevel/hierarchical models*. Cambridge University Press.

- Ghalehban, M., & Besharat, M. A. (2011). Examination and Comparison of Alexithymia and Self-Regulation in Patients with Substance Abuse Disorder and Normal Individuals. *Procedia - Social and Behavioral Sciences*, 30, 38–42.
- Goodlad, K., Ioannou, M., & Hunter, M. (2019). The criminal narrative experience of psychopathic and personality disordered offenders. *International Journal of Offender Therapy and Comparative Criminology*, 63(4), 523-542. doi: 10.1177/0306624X18814169.
- Graham, R. (1988). The concept of alexithymia in the light of the work of Bion. *British Journal of Psychotherapy*, 4(4), 364-379.
- Grieve, R., & Mahar, D. (2010). The emotional manipulation–psychopathy nexus: Relationships with emotional intelligence, alexithymia and ethical position. *Personality and Individual Differences*, 48(8), 945–950.
- Gul, M., Aqeel, M., Akhtar, T., & Rehna, T. (2019). The Moderating Role of Perfectionism on the Relationship between Parenting styles and Personality Disorders in Adolescents. *Foundation University Journal of Psychology*, 3(2).
- Guttman, L. (1968). A general nonmetric technique for finding the smallest coordinate space for a configuration of points. *Psychometrika*, 33, 469-506.
- Hahn, A. M., Simons, R. M., & Simons, J. S. (2016). Childhood Maltreatment and Sexual Risk Taking: The Mediating Role of Alexithymia. *Archives of Sexual Behavior*, 45(1), 53–62.
- Hamidi, S., Rostami, R., Farhoodi, F., & Abdolmanafi, A. (2010). A study and comparison of Alexithymia among patients with substance use disorder and normal people. *Procedia - Social and Behavioral Sciences*, 5, 1367–1370.
- Harms, C. (2017). The Role of Language in Alexithymia: Moving Towards a Multiroute Model. *Emotion Review*, 9(4), 305–320. <https://doi.org/10.1177/1754073919838528>
- Hawkins, L. G., Mullet, N., Tuliao, A. P., Gudenrath, T., Holyoak, D., Landoy, B. V. N., Klanecky, A. K., & McChargue, D. E. (2021). Alexithymia, Prior Trauma, Alcohol Use, and Sexual

Aggression Perpetration: A Cross-Cultural Comparison of a Moderated Mediation Model.
Sexual Abuse: A Journal of Research and Treatment, 33(4), 455–474.

Hawley, T. L., Halle, T. G., Drasin, R. E., & Thomas, N. G. (1995). Children of addicted mothers: Effects of the 'crack epidemic' on the caregiving environment and the development of preschoolers. *The American Journal of Orthopsychiatry*, 65(3), 364–379. .

Heinrichs, M., von Dawans, B., & Domes, G. (2009). Oxytocin, vasopressin, and human social behavior. *Frontiers in neuroendocrinology*, 30(4), 548-557.

Hemmati, T., Mills, J. F., & Kroner, D. G. (2004). The validity of the Bar-On emotional intelligence quotient in an offender population. *Personality and Individual Differences*, 37(4), 695–706. .

Herrmann, M. J., Schreppe, T., Biehl, S. C., Jacob, C., Heine, M., Boreatti Hümmer, A., & Fallgatter, A. J. (2009). Emotional deficits in adult ADHD patients: an ERP study. *Social Cognitive and Affective Neuroscience*, 4(4), 340-345.

Heshmati, R., Jafari, E., Hoseinifar, J., & Ahmadi, M. (2010). Comparative study of alexithymia in patients with schizophrenia spectrum disorders, non-psychotic disorders and normal people. *Procedia - Social and Behavioral Sciences*, 5, 1084–1089.

Hintikka, J., Honkalampi, K., Koivumaa-Honkanen, H., Antikainen, R., Tanskanen, A., Haatainen, K., & Viinamäki, H. (2004). Alexithymia and suicidal ideation: A 12-month follow-up study in a general population. *Comprehensive Psychiatry*, 45(5), 340–345.

Honkalampi, K., Koivumaa-Honkanen, H., Hintikka, J., Antikainen, R., Haatainen, K., Tanskanen, A., & Viinamäki, H. (2004). Do stressful life-events or sociodemographic variables associate with depression and alexithymia among a general population?—A 3-year follow-up study. *Comprehensive Psychiatry*, 45(4), 254–260.

Horneffer, K., & Chan, K.-M. (2009). Alexithymia and relaxation: Considerations in optimising the emotional effectiveness of journaling about stressful experiences. *Cognition & Emotion*, 23(3), 611-622.

- Howard, A. L., Kimonis, E. R., Muñoz, L. C., & Frick, P. J. (2012). Violence exposure mediates the relation between callous-unemotional traits and offending patterns in adolescents. *Journal of Abnormal Child Psychology*, 40(8), 1237–1247.
- Hsu, M.-C., & Ouyang, W.-C. (2021). Effects of integrated violence intervention on alexithymia, cognitive, and neurocognitive features of violence in schizophrenia: A randomized controlled trial. *Brain Sciences*, 11(7).
- Huang, K.-C., Tzeng, D.-S., Lin, C.-H., & Chung, W.-C. (2017). Interpersonal-Psychological Theory, Alexithymia, and Personality Predict Suicide Ideation among Maladjusted Soldiers in Taiwan. *Suicide & Life-Threatening Behavior*, 47(5), 603–611.
- Huang, X., Lin, J., & Demner-Fushman, D. (2006). Evaluation of PICO as a knowledge representation for clinical questions. In *AMIA annual symposium proceedings (Vol. 2006, p. 359)*. American Medical Informatics Association.
- Hund, A. R., & Espelage, D. L. (2005). Childhood Sexual Abuse, Disordered Eating, Alexithymia, and General Distress: A Mediation Model. *Journal of Counseling Psychology*, 52(4), 559–573.
- Hwang, T. Y., Lee, W. K., Ham, B. J., Ryu, S. G., & Park, S. D. (2008). The relationship of mindful attention, negative affect, and alexithymia in depressed outpatients. *Journal of Affective Disorders*, 107, S115–S116.
- Hyer, L., Woods, M. G., & Boudewyns, P. A. (1991). PTSD and alexithymia: Importance of emotional clarification in treatment. *Psychotherapy: Theory, Research, Practice, Training*, 28(1), 129–139.
- Hébert, M., Boisjoli, C., Blais, M., & Oussaïd, E. (2018). Alexithymia as a mediator of the relationship between child sexual abuse and psychological distress in adolescence: A short-term longitudinal study. *Psychiatry Research*, 260, 468–472.

- Ioannou, M., Canter, D., & Youngs, D. (2017). Criminal narrative experience: Relating emotions to offence narrative roles during crime commission. *International Journal of Offender Therapy and Comparative Criminology*, 61(3), 304–323. <https://doi.org/10.1177/0306624X15625991>
- Ioannou, M., & Oostinga, M. S. D. (2016). An empirical framework of control methods of victims of human trafficking for sexual exploitation. *Global Crime*, 16(1), 34-49.
- Ioannou, M., Synnott, J., Lowe, E., & Tzani-Pepelasi, C (2018). Applying the criminal narrative experience framework to young offenders. *International Journal of Offender Therapy and Comparative Criminology*, 62(13), 4091-4107.
- Ioannou, M., & Debowska, A. (2014). Genuine and simulated suicide notes: An analysis of content. *Forensic Science International*, 245, 151-160.
- Ioannou, M., Canter, D., & Youngs, D. (2017). Criminal narrative experience: Relating emotions to offence narrative roles during crime commission. *International Journal of Offender Therapy and Comparative Criminology*, 61(3), 304-323. doi: 10.1177/0306624X15625991.
- Irwin, H. J., & Melbin-Helberg, E. B. (1997). Alexithymia and dissociative tendencies. *Journal of Clinical Psychology*, 53(2), 159–166.
- Jakupcak, M., Osborne, T. L., Michael, S., Cook, J. W., & McFall, M. (2006). Implications of masculine gender role stress in male veterans with posttraumatic stress disorder. *Psychology of Men & Masculinity*, 7(4), 203–211.
- Jonson-Reid, M., & Way, I. (2001). Adolescent sexual offenders: Incidence of childhood maltreatment, serious emotional disturbance, and prior offenses. *The American Journal of Orthopsychiatry*, 71(1), 120–130.
- Joukamaa, M., Luutonen, S., von Reventlow, H., Patterson, P., Karlsson, H., & Salokangas, R. K. R. (2008). Alexithymia and childhood abuse among patients attending primary and psychiatric care: Results of the RADEP Study. *Psychosomatics*, 49(4), 317–325.

- Jørgensen, M. M., Zachariae, R., Skytthe, A., & Kyvik, K. (2007). Genetic and environmental factors in alexithymia: a population-based study of 8,785 Danish twin pairs. *Psychotherapy and psychosomatics*, 76(6), 369-375.
- Kajanoja, J., Scheinin, N. M., Karukivi, M., Karlsson, L., & Karlsson, H. (2018). Is antidepressant use associated with difficulty identifying feelings? A brief report. *Experimental and Clinical Psychopharmacology*, 26(1), 2–5.
- Kajanoja, J., Scheinin, N. M., Karukivi, M., Karlsson, L., & Karlsson, H. (2018). Is antidepressant use associated with difficulty identifying feelings? A brief report. *Experimental and Clinical Psychopharmacology*, 26(1), 2–5. <https://doi.org/10.1037/pha0000165>
- Karukivi, M., Joukamaa, M., Hautala, L., Kaleva, O., Haapasalo-Pesu, K.-M., Liuksila, P.-R., & Saarijärvi, S. (2011). Does perceived social support and parental attitude relate to alexithymia? A study in Finnish late adolescents. *Psychiatry Research*, 187(1–2), 254–260.
- Kefeli, M. C., Turow, R. G., Yildirim, A., & Boysan, M. (2018). Childhood maltreatment is associated with attachment insecurities, dissociation and alexithymia in bipolar disorder. *Psychiatry Research*, 260, 391–399.
- Kench, S., & Irwin, H. J. (2000). Alexithymia and childhood family environment. *Journal of Clinical Psychology*, 56(6), 737–745.
- Khodami, M. A., & Sheibani, L. (2020). An investigation on negative activity, alexithymia, emotion regulation, and internet addiction in a sample of high school students: A randomized controlled trial. *Annales Médico-Psychologiques, Revue Psychiatrique*, 178(6), 624-631.
- Kienle, J., Rockstroh, B., Bohus, M., Fiess, J., Huffziger, S., & Steffen-Klatt, A. (2017). Somatoform dissociation and posttraumatic stress syndrome - two sides of the same medal? A comparison of symptom profiles, trauma history and altered affect regulation between patients with functional neurological symptoms and patients with PTSD. *BMC Psychiatry*, 17(1), 248.

- Kienle, J., Rockstroh, B., Bohus, M., Fiess, J., Huffziger, S., & Steffen-Klatt, A. (2017).
Somatoform dissociation and posttraumatic stress syndrome - two sides of the same medal?
A comparison of symptom profiles, trauma history and altered affect regulation between
patients with functional neurological symptoms and patients with PTSD. *BMC Psychiatry*,
17(1), 248.
- Kinnaird, E., Stewart, C., & Tchanturia, K. (2019). Investigating alexithymia in autism: A
systematic review and meta-analysis. *European Psychiatry*, 55, 80-89.
- Kirmayer, L. J., Robbins, J. M., & Paris, J. (1994). Somatoform disorders: Personality and the
social matrix of somatic distress. *Journal of Abnormal Psychology*, 103(1), 125–136.
- Kirsch, L. G., & Becker, J. V. (2007). Emotional deficits in psychopathy and sexual sadism:
Implications for violent and sadistic behavior. *Clinical Psychology Review*, 27(8), 904–922.
- Konrath, S., Novin, S., & Li, T. (2012). Is the relationship between alexithymia and aggression
context-dependent? Impact of group membership and belief similarity. *Personality and
Individual Differences*, 53(3), 329–334.
- Kooiman, C. G., van Rees Vellinga, S., Spinhoven, P., Draijer, N., Trijsburg, R. W., & Rooijmans,
H. G. M. (2004). Childhood adversities as risk factors for alexithymia and other aspects of
affect dysregulation in adulthood. *Psychotherapy and Psychosomatics*, 73(2), 107–116.
- Kopera, M., Zaorska, J., Trucco, E. M., Suszek, H., Kobyliński, P., Zucker, R. A., Nowakowska,
M., Wojnar, M., & Jakubczyk, A. (2020). Childhood trauma, alexithymia, and mental states
recognition among individuals with alcohol use disorder and healthy controls. *Drug and
Alcohol Dependence*, 217, 108301.
- Koven, N. S. (2011). Specificity of meta-emotion effects on moral decision-making. *Emotion*,
11(5), 1255–1261.
- Kraper, C. K., Kenworthy, L., Popal, H., Martin, A., & Wallace, G. L. (2017). The gap between
adaptive behavior and intelligence in autism persists into young adulthood and is linked to

psychiatric co-morbidities. *Journal of autism and developmental disorders*, 47, 3007-3017.

<https://doi.org/10.1007/s10803-017-3213-2>

Kubota, M., Miyata, J., Hirao, K., Fujiwara, H., Kawada, R., Fujimoto, S., Tanaka, Y., Sasamoto, A., Sawamoto, N., Fukuyama, H., Takahashi, H., & Murai, T. (2011). Alexithymia and regional gray matter alterations in schizophrenia. *Neuroscience Research*, 70(2), 206–213.

Kunjakrishnan, R., & Varan, L. R. (1992). Major affective disorders and forensic psychiatry. *The Psychiatric Clinics of North America*, 15(3), 569–574.

Lakind, D., & Atkins, M. S. (2018). Promoting positive parenting for families in poverty: New directions for improved reach and engagement. *Children and Youth Services Review*, 89, 34-42.

Lander, G. C., Lutz-Zois, C. J., Rye, M. S., & Goodnight, J. A. (2012). The differential association between alexithymia and primary versus secondary psychopathy. *Personality and Individual Differences*, 52(1), 45–50.

Lane, R. D., Sechrest, L., & Riedel, R. (1998). Sociodemographic correlates of alexithymia. *Comprehensive Psychiatry*, 39(6), 377–385.

Lane, R. D., Lee, S., Reidel, R., Weldon, V., Kaszniak, A., & Schwartz, G. E. (1996). Impaired verbal and nonverbal emotion recognition in alexithymia. *Psychosomatic medicine*, 58(3), 203-210.

Lane, R. D., Sechrest, L., & Riedel, R. (1998). Sociodemographic correlates of alexithymia. *Comprehensive Psychiatry*, 39(6), 377–385. [https://doi.org/10.1016/S0010-440X\(98\)90051-7](https://doi.org/10.1016/S0010-440X(98)90051-7)

Larsen, J. K., van Strien, T., Eisinga, R., & Engels, R. C. M. E. (2006). Gender differences in the association between alexithymia and emotional eating in obese individuals. *Journal of Psychosomatic Research*, 60(3), 237–243.

- Latham, J. R. (2016). The research canvas. A framework for redesigning and aligning the "DNA" of your research study. Website name.
- Le Berre, A.-P. (2019). Emotional processing and social cognition in alcohol use disorder. *Neuropsychology*, 33(6), 808–821.
- Lee, S.P., Jong-Hyun, J., Seung-Chul, H., & Jin-Hee, H. (2008). Depression, anxiety, alexithymia, stress response in caregivers of attention deficit hyperactivity disorder patient. *Journal of Affective Disorders*, 107, S112.
- Lee, S.-Y., Kim, M.-D., Seo, J., Lee, K., Jon, D.-I., & Bahk, W.-M. (2019). The effects of group arts therapy based on emotion management training on the emotional expression, alexithymia, depression and quality of life in patients with schizophrenia. *Schizophrenia Bulletin*, 45, S243-.
- Lee, S. A., & Guajardo, N. R. (2011). Affect intensity and alexithymia differentially influence the relationship between neuroticism and depressive symptomatology among college students. *Personality and Individual Differences*, 50(5), 646–650.
- Leising, D., Grande, T., & Faber, R. (2009). The Toronto Alexithymia Scale (TAS-20): A measure of general psychological distress. *Journal of Research in Personality*, 43(4), 707-710.
- Leshem, R., van Lieshout, P. H. H. M., Ben-David, S., & Ben-David, B. M. (2019). Does emotion matter? The role of alexithymia in violent recidivism: A systematic literature review. *Criminal Behaviour and Mental Health: CBMH*, 29(2), 94–110.
- Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: advancing the methodology. *Implementation Science*, 5(1), 1–9. <https://doi.org/10.1186/1748-5908-5-69>
- Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: advancing the methodology. *Implementation science*, 5(1), 1-9.

- Li, S., Zhang, B., Guo, Y., & Zhang, J. (2015). The association between alexithymia as assessed by the 20-item Toronto Alexithymia Scale and depression: A meta-analysis. *Psychiatry research*, 227(1), 1–9. <https://doi.org/10.1016/j.psychres.2015.02.006>
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., ... & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Journal of clinical epidemiology*, 62(10), e1-e34.
- Lichev, V., Rufer, M., Rosenberg, N., Ihme, K., Grabe, H. J., Kugel, H., ... & Suslow, T. (2014). Assessing alexithymia and emotional awareness: Relations between measures in a German non-clinical sample. *Comprehensive Psychiatry*, 55(4), 952-959.
- Liu, H., Wang, W., Yang, J., Guo, F., & Yin, Z. (2021). The effects of alexithymia, experiential avoidance, and childhood sexual abuse on non-suicidal self-injury and suicidal ideation among Chinese college students with a history of childhood sexual abuse. *Journal of Affective Disorders*, 282, 272–279.
- Liu, H., Wang, W., Yang, J., Guo, F., & Yin, Z. (2021). The effects of alexithymia, experiential avoidance, and childhood sexual abuse on non-suicidal self-injury and suicidal ideation among Chinese college students with a history of childhood sexual abuse. *Journal of Affective Disorders*, 282, 272–279.
- Loas, G., Speranza, M., Pham-Scottez, A., Perez-Diaz, F., & Corcos, M. (2012). Alexithymia in adolescents with borderline personality disorder. *Journal of Psychosomatic Research*, 72(2), 147–152.
- Loas, G. (2012). Alexithymia and dependent personality disorder. *Psychiatry Research*, 196(2–3), 325–326.

- Loas, G., Fremaux, D., Otmani, O., Lecercle, C., & Delahousse, J. (1997). Is alexithymia a negative factor for maintaining abstinence? A follow-up study. *Comprehensive Psychiatry*, 38(5), 296–299.
- Lorenzo-Seva, U., & ten Berge, J. M. (2006). Tucker's congruence coefficient as a meaningful index of factor similarity. *Methodology*, 2(2), 57-64.
- Louth, S. M., Hare, R. D., & Linden, W. (1998). Psychopathy and alexithymia in female offenders. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, 30(2), 91–98.
- Lovik, A., Nassiri, V., Verbeke, G., & Molenberghs, G. (2020). A modified Tucker's congruence coefficient for factor matching. *PsychOpen*.
- Lukas, C., Trevisi Fuentes, H., & Berking, M. (2019). Smartphone-based emotion recognition skills training for alexithymia—A randomized controlled pilot study. *Internet Interventions*, 17.
- Luminet, O., Grynberg, D., Ruzette, N., & Mikolajczak, M. (2011). Personality-dependent effects of oxytocin: Greater social benefits for high alexithymia scorers. *Biological Psychology*, 87(3), 401–406.
- Lumley, M. A., Neely, L. C., & Burger, A. J. (2007). The assessment of alexithymia in medical settings: implications for understanding and treating health problems. *Journal of Personality Assessment*, 89(3), 230-246.
- Lundh, L.-G., & Broman, J.-E. (2006). Alexithymia and insomnia. *Personality and Individual Differences*, 40(8), 1615–1624.
- Lutz-Zois, C. J., Phelps, C. E. R., & Reichle, A. C. (2011). Affective, behavioral, and social-cognitive dysregulation as mechanisms for sexual abuse revictimization. *Violence & Victims*, 26(2), 159–176.

- Lyvers, M., Onuoha, R., Thorberg, F. A., & Samios, C. (2012). Alexithymia in relation to parental alcoholism, everyday frontal lobe functioning and alcohol consumption in a non-clinical sample. *Addictive Behaviors, 37*(2), 205–210.
- Lüdtke, J., In-Albon, T., Michel, C., & Schmid, M. (2016). Predictors for DSM-5 nonsuicidal self-injury in female adolescent inpatients: The role of childhood maltreatment, alexithymia, and dissociation. *Psychiatry Research, 239*, 346–352.
- MacMurray, J. P., & Bozzetti, L. P. (1987). Prostaglandin synthesis among alcoholic suicide attempters and nonattempters. *Neuropsychobiology, 17*(4), 178-181.
- Mallinckrodt, B., & Wei, M. (2005). Attachment, Social Competencies, Social Support, and Psychological Distress. *Journal of Counseling Psychology, 52*(3), 358–367.
- Mallinckrodt, B., King, J. L., & Coble, H. M. (1998). Family dysfunction, alexithymia, and client attachment to therapist. *Journal of Counseling Psychology, 45*(4), 497–504.
- Marchesi, C., Bertoni, S., Cantoni, A., & Maggini, C. (2008). Is alexithymia a personality trait increasing the risk of depression? A prospective study evaluating alexithymia before, during and after a depressive episode. *Psychological Medicine, 38*(12), 1717–1722.
<https://doi.org/10.1017/S0033291708003073>
- Marchesi, C., Bertoni, S., Cantoni, A., & Maggini, C. (2008). Is alexithymia a personality trait increasing the risk of depression? A prospective study evaluating alexithymia before, during and after a depressive episode. *Psychological Medicine, 38*(12), 1717–1722.
- Marchesi, C., Brusamonti, E., & Maggini, C. (2000). Are alexithymia, depression, and anxiety distinct constructs in affective disorders? *Journal of Psychosomatic Research, 49*(1), 43–49.
- Mazzeo, S. E., Mitchell, K. S., & Williams, L. J. (2008). Anxiety, Alexithymia, and Depression as Mediators of the Association between Childhood Abuse and Eating Disordered Behavior in African American and European American Women. *Psychology of Women Quarterly, 32*(3), 267–280.

- Mazzeo, S. E., Mitchell, K. S., & Williams, L. J. (2008). Anxiety, Alexithymia, and Depression as Mediators of the Association between Childhood Abuse and Eating Disordered Behavior in African American and European American Women. *Psychology of Women Quarterly*, 32(3), 267–280.
- Mazzeo, S. E., & Espelage, D. L. (2002). Association between childhood physical and emotional abuse and disordered eating behaviors in female undergraduates: An investigation of the mediating role of alexithymia and depression. *Journal of Counselling Psychology*, 49(1), 86–100.
- McAdams, D.P., & McLean, K.C. (2013). Narrative identity. *Current Directions in Psychological Science*, 22(3), 233-238. doi:10.1177/0963721413475622.
- McCallum, M., Piper, W. E., Ogradniczuk, J. S., & Joyce, A. S. (2003). Relationships among psychological mindedness, alexithymia and outcome in four forms of short-term psychotherapy. *Psychology and Psychotherapy: Theory, Research and Practice*, 76(2), 133–144.
- Mccaslin, S. E. (2006). Association Between Alexithymia and Neuroendocrine Response to Psychological Stress in Police Academy Recruits. *Annals of the New York Academy of Sciences*, 1071(1), 425–427.
- McCaslin, S. E., Metzler, T. J., Best, S. R., Liberman, A., Weiss, D. S., Fagan, J., & Marmar, C. R. (2006). Alexithymia and PTSD symptoms in urban police officers: Cross-sectional and prospective findings. *Journal of Traumatic Stress*, 19(3), 361–373.
- McDougall, J. (1982). Alexithymia: a psychoanalytic viewpoint. *Psychotherapy and psychosomatics*, 38(1-4), 81-90.
- McLean, L. M., Toner, B., Jackson, J., Desrocher, M., & Stuckless, N. (2006). The relationship between childhood sexual abuse, complex post-traumatic stress disorder and alexithymia in

two outpatient samples: Examination of women treated in community and institutional clinics. *Journal of Child Sexual Abuse*, 15(3), 1–17.

McMurrin, M., & Jinks, M. (2011) Making Your Emotions Work for You: A pilot brief intervention for alexithymia with personality-disordered offenders. *Personality and Mental Health*, 6(1),45-49.

Miller, P. G., Butler, E., Richardson, B., Staiger, P. K., Youssef, G. J., Macdonald, J. A., ... & Olsson, C. A. (2016). Relationships between problematic alcohol consumption and delinquent behaviour from adolescence to young adulthood. *Drug and Alcohol Review*, 35(3), 317-325.

Miller II, R. J., & Johnson, D. R. (2012). The capacity for symbolization in posttraumatic stress disorder. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(1), 112–116.

Minnich, A. M., Gordon, K. H., Kwan, M. Y., & Troop-Gordon, W. (2017). Examining the mediating role of alexithymia in the association between childhood neglect and disordered eating behaviors in men and women. *Psychology of Men & Masculinity*, 18(4), 414–421.

Minshew, R., & D’Andrea, W. (2015). Implicit and explicit memory in survivors of chronic interpersonal violence. *Psychological Trauma: Theory, Research, Practice, and Policy*, 7(1), 67–75.

Mitrovic Dana, & Brown Jac. (2009). Poker mania and problem gambling: A study of distorted cognitions, motivation and alexithymia. *Journal of Gambling Studies*, (25), 489-502.
<https://link.springer.com/article/10.1007/s10899-009-9140-1>

Moffitt, T. E. (2017). The new look of behavioral genetics in developmental psychopathology: Gene-environment interplay in antisocial behaviors. *Biosocial Theories of Crime*, 183-204.

Morie, K. P., Zhai, Z. W., Potenza, M. N., & Mayes, L. C. (2020). Alexithymia, Emotion-Regulation Strategies, and Traumatic Experiences in Prenatally Cocaine-Exposed Young Adults. *The American Journal on Addictions*, 29(6), 492–499.

- Morie, K., Nich, C., Hunkele, K., Potenza, M., & Carroll, K. (2015). Alexithymia level and response to computer-based training in cognitive behavioral therapy among cocaine-dependent methadone maintained individuals. *Drug and Alcohol Dependence*, 152, 157–163.
- Morie, K., Nich, C., Hunkele, K., Potenza, M., & Carroll, K. (2015). Alexithymia level and response to computer-based training in cognitive behavioral therapy among cocaine-dependent methadone maintained individuals. *Drug and Alcohol Dependence*, 152, 157–163. <https://doi.org/10.1016/j.drugalcdep.2015.04.004>
- Möller, C., Falkenström, F., Holmqvist Larsson, M., & Holmqvist, R. (2014). Mentalizing in young offenders. *Psychoanalytic Psychology*, 31(1), 84–99.
- Müller, J., Bühner, M., & Ellgring, H. (2003). Relationship and Differential Validity of Alexithymia and Depression: A Comparison of the Toronto Alexithymia and Self-Rating Depression Scales. *Psychopathology*, 36(2), 71–77.
- Nan, J., & Ho, R. (2017). Effects of clay art therapy on adults outpatients with major depressive disorder: A randomized controlled trial. *Journal of Affective Disorders*, 217, 237–245.
- Nemiah, J. C., Freyberger, H., & Sifneos, P. E. (1976). Alexithymia: A view of the psychosomatic process. In O.W. Hill (Ed.), *Modern Trends in Psychosomatic Medicine* (Vol. 3, pp. 430–439). London: Butterworths.
- Neumann, S. A., Sollers, J. J., Thayer, J. F., & Waldstein, S. R. (2004). Alexithymia predicts attenuated autonomic reactivity, but prolonged recovery to anger recall in young women. *International Journal of Psychophysiology*, 53(3), 183–195.
- Neumann, D., Malec, J., & Hammond, F. (2017). Reductions in Alexithymia and Emotion Dysregulation After Training Emotional Self-Awareness Following Traumatic Brain Injury: A Phase I Trial. *Journal of Head Trauma Rehabilitation*, (no pagination).

- Ni, H. C., & Gau, S. S. F. (2015). Co-occurrence of attention-deficit hyperactivity disorder symptoms with other psychopathology in young adults: parenting style as a moderator. *Comprehensive Psychiatry*, *57*, 85-96.
- Nicolò, G., Semerari, A., Lysaker, P. H., Dimaggio, G., Conti, L., D'Angerio, S., Procacci, M., Popolo, R., & Carcione, A. (2011). Alexithymia in personality disorders: Correlations with symptoms and interpersonal functioning. *Psychiatry Research*, *190*(1), 37–42.
- Nicolò, G., Semerari, A., Lysaker, P. H., Dimaggio, G., Conti, L., D'Angerio, S., Procacci, M., Popolo, R., & Carcione, A. (2011). Alexithymia in personality disorders: Correlations with symptoms and interpersonal functioning. *Psychiatry Research*, *190*(1), 37–42.
- Nicolò, G., Semerari, A., Lysaker, P. H., Dimaggio, G., Conti, L., D'Angerio, S., Procacci, M., Popolo, R., & Carcione, A. (2012). Dependent personality disorders unlike avoidant personality disorders are not related to alexithymia after controlling for depression: A reply to Loas. *Psychiatry Research*, *196*(2–3), 327–328.
- Obeid, S., Akel, M., Haddad, C., Fares, K., Sacre, H., Salameh, P., & Hallit, S. (2020). Factors associated with alcohol use disorder: The role of depression, anxiety, stress, alexithymia and work fatigue- a population study in Lebanon. *BMC Public Health*, *20*(1), 245.
- Obeid, S., Haddad, C., Akel, M., Fares, K., Salameh, P., & Hallit, S. (2019). Factors associated with the adults' attachment styles in Lebanon: The role of alexithymia, depression, anxiety, stress, burnout, and emotional intelligence. *Perspectives in Psychiatric Care*, *55*(4), 607–617.
- Ogrodniczuk, J. S., Piper, W. E., & Joyce, A. S. (2005). The negative effect of alexithymia on the outcome of group therapy for complicated grief: What role might the therapist play? *Comprehensive Psychiatry*, *46*(3), 206–213.
- Ogrodniczuk, J. S., Piper, W. E., & Joyce, A. S. (2011). Effect of alexithymia on the process and outcome of psychotherapy: A programmatic review. *Psychiatry Research*, *190*(1), 43–48.

- Oostdam, R., & Hooge, E. (2013). Making the difference with active parenting; forming educational partnerships between parents and schools. *European Journal of Psychology of Education, 28*, 337-351.
- Oyefeso, A., Brown, S., Chiang, Y., & Clancy, C. (2008). Self-injurious behaviour, traumatic life events and alexithymia among treatment-seeking opiate addicts: Prevalence, pattern and correlates. *Drug and Alcohol Dependence, 98*(3), 227–234.
- O’Loughlin, J. I., Cox, D. W., Kahn, J. H., & Wu, A. D. (2018). Attachment avoidance, alexithymia, and gender: Examining their associations with distress disclosure tendencies and event-specific disclosure. *Journal of Counseling Psychology, 65*(1), 65–73.
- Paivio, S. C., & McCulloch, C. R. (2004). Alexithymia as a mediator between childhood trauma and self-injurious behaviors. *Child Abuse & Neglect, 28*(3), 339–354.
- Parling, T., Mortazavi, M., & Ghaderi, A. (2010). Alexithymia and emotional awareness in anorexia nervosa: Time for a shift in the measurement of the concept? *Eating Behaviors, 11*(4), 205–210.
- Parry, C. L., Preece, D. A., Allan, M. M., & Allan, A. (2021). Alexithymia in nonviolent offenders. *Criminal Behaviour and Mental Health: CBMH, 31*(1), 44–48.
- Picardi, A., Fagnani, C., Gigantesco, A., Toccaceli, V., Lega, I., & Stazi, M. A. (2011). Genetic influences on alexithymia and their relationship with depressive symptoms. *Journal of Psychosomatic Research, 71*(4), 256–263.
- Porcelli, P. (2004). *38-Psychiatric Disorders and Functional GI disorders (FGID): role of alexithymia and psychopathology*. *Journal of Psychosomatic Research, 56*(6), 659.
- Preece, D. A., Becerra, R., Allan, A., Robinson, K., Chen, W., Hasking, P., & Gross, J. J. (2020). Assessing alexithymia: Psychometric properties of the Perth Alexithymia Questionnaire and 20-item Toronto Alexithymia Scale in United States adults. *Personality and Individual Differences, 166*, 110138.

- Preece, D. A., Becerra, R., Allan, A., Robinson, K., & Dandy, J. (2018). Establishing the theoretical components of alexithymia via factor analysis: Introduction and validation of the attention-appraisal model of alexithymia. *Personality and Individual Differences*, 130, 106–115. <https://doi.org/10.1016/j.paid.2018.04.008>
- Quilty, L., Taylor, G., McBride, C., & Bagby, R. (2017). Relationships among alexithymia, therapeutic alliance, and psychotherapy outcome in major depressive disorder. *Psychiatry Research*, 254, 75-79.
- Quinton, S., & Wagner, H. L. (2005). Alexithymia, ambivalence over emotional expression, and eating attitudes. *Personality and Individual Differences*, 38(5), 1163–1173.
- Rehman, A., Gumley, A., & Biello, S. (2018). Sleep quality and paranoia: The role of alexithymia, negative emotions and perceptual anomalies. *Psychiatry Research*, 259, 216–222.
- Ridout, N., Wallis, D. J., Autwal, Y., Kralj, A., Sellis, J., & Taylor, E. (2011). The influence of alexithymia and mood on eating psychopathology in a non-clinical female sample. *Appetite*, 57(2), 565.
- Ridout, N., Thom, C., & Wallis, D. J. (2010). Emotion recognition and alexithymia in females with non-clinical disordered eating. *Eating Behaviors*, 11(1), 1–5.
- Rogstad, J. E., & Rogers, R. (2008). Gender differences in contributions of emotion to psychopathy and antisocial personality disorder. *Clinical Psychology Review*, 28(8), 1472–1484.
- Romero Martínez, Á., Lila, M., & Moya-Albiol, L. (2019). The Importance of Considering Alexithymia during Initial Stages of Intimate Partner Violence Interventions to Design Adjuvant Treatments. *International Journal of Environmental Research and Public Health*, 16(19), E3695.
- Romero-Martínez, Á., Lila, M., & Moya-Albiol, L. (2021). Alexithymic traits are closely related to impulsivity and cognitive and empathic dysfunctions in intimate partner violence perpetrators: New targets for intervention. *Applied Neuropsychology. Adult*, 28(1), 71–79.

- Rozanski, S., Schmidt, A., John, A., & Gaysina, D. (2021). Childhood neglect and trajectories of affective symptoms throughout adulthood: A British birth cohort study. *Journal of Affective Disorders*, 295, 416–421.
- Ryder, A. G., Yang, J., Zhu, X., Yao, S., Yi, J., Heine, S. J., & Bagby, R. M. (2008). The cultural shaping of depression: Somatic symptoms in China, psychological symptoms in North America? *Journal of Abnormal Psychology*, 117(2), 300–313.
- Råstam, M., Gillberg, C., Gillberg, I. C., & Johansson, M. (1997). Alexithymia in anorexia nervosa: A controlled study using the 20-item Toronto Alexithymia Scale. *Acta Psychiatrica Scandinavica*, 95(5), 385–388.
- Saarijärvi, S., Salminen, J. K., & Toikka, T. B. (2001). Alexithymia and depression. *Journal of Psychosomatic Research*, 51(6), 729–733.
- Saladin, M. E., Santa Ana, E. J., LaRowe, S. D., Simpson, A. N., Tolliver, B. K., Price, K. L., McRae-Clark, A. L., & Brady, K. T. (2012). Does Alexithymia Explain Variation in Cue-Elicited Craving Reported by Methamphetamine-Dependent Individuals?: Alexithymia and Drug Craving. *The American Journal on Addictions*, 21(2), 130–135.
- Saunders, E. B., & Awad, G. A. (1988). Assessment, management, and treatment planning for male adolescent sexual offenders. *American Journal of Orthopsychiatry*, 58(4), 571-579.
- Schimmenti, A., Passanisi, A., Caretti, V., La Marca, L., Granieri, A., Iacolino, C., Gervasi, A. M., Maganuco, N. R., & Billieux, J. (2017). Traumatic experiences, alexithymia, and Internet addiction symptoms among late adolescents: A moderated mediation analysis. *Addictive Behaviors*, 64, 314–320.
- Shye, S., Elizur, D., & Hoffman, M. (1994). Facet theory. *International encyclopedia of education*, 2213-2219.
- Sifneos, P. E. (2000). Alexithymia, clinical issues, politics and crime. *Psychotherapy and Psychosomatics*, 69(3), 113–116.

- Sifneos, P. E. (1973). The prevalence of 'alexithymic' characteristics in psychosomatic patients. *Psychotherapy and psychosomatics*, 22(2-6), 255-262
- Simha-Alpern, A. (2007). 'I finally have words!' Integrating a psychodynamic psychotherapeutic approach with principles of emotional intelligence training in treating trauma survivors. *Journal of Psychotherapy Integration*, 17(4), 293–313.
- Simner, J., Smees, R., Rinaldi, L. J., & Carmichael, D. A. (2021). Wellbeing differences in children with synaesthesia: Anxiety and mood regulation. *Frontiers in Bioscience (Elite Edition)*, 13, 195–215.
- Spek, V., Nyklek, I., Cuijpers, P., & Pop, V. (2008). Alexithymia and cognitive behaviour therapy outcome for subthreshold depression. *Acta Psychiatrica Scandinavica*, 118(2), 164–167.
- Speranza, M., Corcos, M., Loas, G., Stéphan, P., Guilbaud, O., Perez-Diaz, F., Venisse, J.-L., Bizouard, P., Halfon, O., Flament, M., & Jeammet, P. (2005). Depressive personality dimensions and alexithymia in eating disorders. *Psychiatry Research*, 135(2), 153–163.
- Speranza, M., Loas, G., Wallier, J., & Corcos, M. (2007). Predictive value of alexithymia in patients with eating disorders: A 3-year prospective study. *Journal of Psychosomatic Research*, 63(4), 365–371.
- Speranza, M., Loas, G., Guilbaud, O., & Corcos, M. (2011). Are treatment options related to alexithymia in eating disorders? Results from a three-year naturalistic longitudinal study. *Biomedicine & Pharmacotherapy*, 65(8), 585–589.
- Stasiewicz, P. R., Bradizza, C. M., Gudleski, G. D., Coffey, S. F., Schlauch, R. C., Bailey, S. T., Bole, C. W., & Gulliver, S. B. (2012). The relationship of alexithymia to emotional dysregulation within an alcohol dependent treatment sample. *Addictive Behaviors*, 37(4), 469–476.
- Stingl, M., Hanewald, B., Kruse, J., & Sack, M. (2021). Positive side effects in trauma-focusing PTSD treatment: Reduction of attendant symptoms and enhancement of affective and

- structural regulation. *Psychological Trauma: Theory, Research, Practice, and Policy*, 13(6), 713–721.
- Stingl, M., Bausch, S., Walter, B., Kagerer, S., Leichsenring, F., & Leweke, F. (2008). Effects of inpatient psychotherapy on the stability of alexithymia characteristics. *Journal of Psychosomatic Research*, 65(2), 173–180.
- Strodl, E., & Wylie, L. (2020). Childhood trauma and disordered eating: Exploring the role of alexithymia and beliefs about emotions. *Appetite*, 154, 104802.
- Strodl, E., & Wylie, L. (2020). Childhood trauma and disordered eating: Exploring the role of alexithymia and beliefs about emotions. *Appetite*, 154, 104802.
- Sullivan, E. V., Brumback, T., Tapert, S. F., Fama, R., Prouty, D., Brown, S. A., ... & Pfefferbaum, A. (2016). Cognitive, emotion control, and motor performance of adolescents in the NCANDA study: Contributions from alcohol consumption, age, sex, ethnicity, and family history of addiction. *Neuropsychology*, 30(4), 449.
- Swannell, S., Martin, G., Page, A., Hasking, P., Hazell, P., Taylor, A., & Protani, M. (2012). Child maltreatment, subsequent non-suicidal self-injury and the mediating roles of dissociation, alexithymia and self-blame. *Child Abuse & Neglect*, 36(7–8), 572–584.
- Swannell, S., Martin, G., Page, A., Hasking, P., Hazell, P., Taylor, A., & Protani, M. (2012). Child maltreatment, subsequent non-suicidal self-injury and the mediating roles of dissociation, alexithymia and self-blame. *Child Abuse & Neglect*, 36(7–8), 572–584.
- Synnott, J., Ioannou, M., Coyne, A., & Hemingway, S. (2018). A content analysis of online suicide notes: attempted suicide versus attempt resulting in suicide. *Suicide and Life-Threatening Behavior*, 48(6), 767-778.
- Tam, B., Sze, A., Suen, A., Mo, M., Lee, L., & Li, S. (2020). 114—Assessing the role of maternal alexithymia and quality of family interaction on adolescent alexithymia and somatic

- depression using structural equation modelling. *Journal of Psychosomatic Research*, 133, 110018.
- Tarrier, N., Kinney, C., McCarthy, E., Wittkowski, A., Yusupoff, L., & Gledhill, A. (2001). Are some types of psychotic symptoms more responsive to cognitive-behaviour therapy? *Behavioural and Cognitive Psychotherapy*, 29(1), 45-55.
- Taylor, G. J. (2000). Recent developments in alexithymia theory and research. *The Canadian Journal of Psychiatry*, 45(2), 134-142.
- Taylor, G. J., & Bagby, R. M. (2004). New trends in alexithymia research. *Psychotherapy and psychosomatics*, 73(2), 68-77.
- Terock, J., Van der Auwera, S., Janowitz, D., Spitzer, C., Barnow, S., Miertsch, M., Freyberger, H. J., & Grabe, H.-J. (2016). From Childhood Trauma to Adult Dissociation: The Role of PTSD and Alexithymia. *Psychopathology*, 49(5), 374–382.
- Terock, J., Van der Auwera, S., Janowitz, D., Spitzer, C., Barnow, S., Miertsch, M., Freyberger, H. J., & Grabe, H.-J. (2016). From Childhood Trauma to Adult Dissociation: The Role of PTSD and Alexithymia. *Psychopathology*, 49(5), 374–382.
- Terock, J., Van der Auwera, S., Janowitz, D., Wittfeld, K., Frenzel, S., Klinger-König, J., & Grabe, H. J. (2020). Childhood trauma and adult declarative memory performance in the general population: The mediating effect of alexithymia. *Child Abuse & Neglect*, 101, 104311.
- Teten, A. L., Miller, L. A., Bailey, S. D., Dunn, N. J., & Kent, T. A. (2008). Empathic deficits and alexithymia in trauma-related impulsive aggression. *Behavioral Sciences & the Law*, 26(6), 823–832.
- Thomas, R., DiLillo, D., Walsh, K., & Polusny, M. A. (2011). Pathways from child sexual abuse to adult depression: The role of parental socialization of emotions and alexithymia. *Psychology of Violence*, 1(2), 121–135.

- Thorberg, F. A., Young, R. McD., Sullivan, K. A., Lyvers, M., Connor, J. P., & Feeney, G. F. X. (2010). A psychometric comparison of the Toronto Alexithymia Scale (TAS-20) and the Observer Alexithymia Scale (OAS) in an alcohol-dependent sample. *Personality and Individual Differences, 49*(2), 119–123.
- Thorberg, F. A., Young, R. M., Sullivan, K. A., Lyvers, M., Hurst, C., Connor, J. P., & Feeney, G. F. X. (2010). A confirmatory factor analysis of the Toronto Alexithymia Scale (TAS-20) in an alcohol-dependent sample. *Psychiatry Research, 178*(3), 565–567.
- Thorberg, F. A., Young, R. McD., Sullivan, K. A., & Lyvers, M. (2009). Alexithymia and alcohol use disorders: A critical review. *Addictive Behaviors, 34*(3), 237–245.
- Thorberg, F. A., Young, R. McD., Sullivan, K. A., Lyvers, M., Hurst, C. P., Connor, J. P., & Feeney, G. F. X. (2011). Alexithymia in alcohol dependent patients is partially mediated by alcohol expectancy. *Drug and Alcohol Dependence, 116*(1–3), 238–241.
- Thorberg, F. A., Young, R. McD., Sullivan, K. A., Lyvers, M., Connor, J. P., & Feeney, G. F. X. (2011). Alexithymia, craving and attachment in a heavy drinking population. *Addictive Behaviors, 36*(4), 427–430.
- Thorberg, F. A., Young, R. McD., Sullivan, K. A., Lyvers, M., Hurst, C. P., Connor, J. P., Tyssen, R., London, E. D., Noble, E. P., & Feeney, G. F. X. (2016). A longitudinal mediational study on the stability of alexithymia among alcohol-dependent outpatients in cognitive-behavioral therapy. *Psychology of Addictive Behaviors, 30*(1), 64–72.
- Topciu, R. A., Zhao, X., Tang, W., Heisel, M. J., Talbot, N. L., & Duberstein, P. R. (2009). Childhood sexual abuse and personality differentiating high and low alexithymia in a depressed population. *Psychotherapy and Psychosomatics, 78*(6), 385–387.
- Uzun, Ö. (2003). Alexithymia in male alcoholics: Study in a Turkish sample. *Comprehensive Psychiatry, 44*(4), 349–352.

- van Dijke, A., Ford, J. D., van Son, M., Frank, L., & van der Hart, O. (2013). Association of childhood-trauma-by-primary caregiver and affect dysregulation with borderline personality disorder symptoms in adulthood. *Psychological Trauma: Theory, Research, Practice, and Policy*, 5(3), 217–224.
- van Strien, T., & Ouwens, M. A. (2007). Effects of distress, alexithymia and impulsivity on eating. *Eating Behaviors*, 8(2), 251–257.
- van 't Wout, M., Aleman, A., Bermond, B., & Kahn, R. S. (2007). No words for feelings: Alexithymia in schizophrenia patients and first-degree relatives. *Comprehensive Psychiatry*, 48(1), 27–33.
- Vanheule, S., Verhaeghe, P., & Desmet, M. (2010). In search of a framework for the treatment of alexithymia. *Psychology and Psychotherapy: Theory, Research and Practice*.
- Vermeulen, N. (2021). Alexithymia disrupts verbal short-term memory. *Cognition & Emotion*, 35(3), 559-568.
- Vilhena-Churchill, N., & Goldstein, A. L. (2014). Child maltreatment and marijuana problems in young adults: Examining the role of motives and emotion dysregulation. *Child Abuse & Neglect*, 38(5), 962–972.
- Vorst, H. C., & Bermond, B. (2001). Validity and reliability of the Bermond–Vorst alexithymia questionnaire. *Personality and individual differences*, 30(3), 413-434.
- Wachs, S., & Wright, M. F. (2018). Bullying and alexithymia: Are there differences between traditional, cyber, combined bullies, and nonbullies in reading their own emotions? *Criminal Behaviour and Mental Health: CBMH*, 28(5), 409–413.
- Wachs, S., Bilz, L., Fischer, S. M., & Wright, M. F. (2017). Do Emotional Components of Alexithymia Mediate the Interplay between Cyberbullying Victimization and Perpetration? *International Journal of Environmental Research and Public Health*, 14(12), E1530.

- Walsh, K., Gonsalves, V. M., Scalora, M. J., King, S., & Hardyman, P. L. (2012). Child maltreatment histories among female inmates reporting inmate on inmate sexual victimization in prison: The mediating role of emotion dysregulation. *Journal of Interpersonal Violence, 27*(3), 492–512.
- Wang, X., Chung, M. C., Hyland, M. E., & Bahkeit, M. (2011). Posttraumatic stress disorder and psychiatric co-morbidity following stroke: The role of alexithymia. *Psychiatry Research, 188*(1), 51–57.
- Wang, K., Weiss, N. H., Pachankis, J. E., & Link, B. G. (2016). Emotional clarity as a buffer in the association between perceived mental illness stigma and suicide risk. *Stigma and Health, 1*(4), 252.
- Wearden, A. J., Lambertson, N., Crook, N., & Walsh, V. (2005). Adult attachment, alexithymia, and symptom reporting. *Journal of Psychosomatic Research, 58*(3), 279–288.
- Webb, D., & McMurrin, M. (2008) Emotional intelligence, alexithymia and borderline personality disorder traits in young adults. *Personality and Mental Health 2*(4), 265-273.
- Wiggins, T. L., Sofronoff, K., & Sanders, M. R. (2009). Pathways triple P-positive parenting program: effects on parent-child relationships and child behavior problems. *Family process, 48*(4), 517-530.
- Williams, L., Curren, C., & Bruce, G. (2011). Are alexithymia and Type D personality distinct or overlapping constructs? A confirmatory factor analysis of the Toronto alexithymia and Type D scales. *Personality and Individual Differences, 51*(5), 683–686.
- Williams, W. H., Chitsabesan, P., Fazel, S., McMillan, T., Hughes, N., Parsonage, M., & Tonks, J. (2018). Traumatic brain injury: A potential cause of violent crime? *The Lancet. Psychiatry, 5*(10), 836–844.
- Wingenfeld, K., Riedesel, K., Petrovic, Z., Philippson, C., Meyer, B., Rose, M., Grabe, H. J., Barnow, S., Löwe, B., & Spitzer, C. (2011). Impact of childhood trauma, alexithymia,

- dissociation, and emotion suppression on emotional Stroop task. *Journal of Psychosomatic Research*, 70(1), 53–58.
- Wolff, S., Holl, J., Stopsack, M., Arens, E. A., Höcker, A., Staben, K. A., Hiller, P., Klein, M., Schäfer, I., Barnow, S., & CANSAS Study Group. (2016). Does Emotion Dysregulation Mediate the Relationship between Early Maltreatment and Later Substance Dependence? Findings of the CANSAS Study. *European Addiction Research*, 22(6), 292–300.
- Wolff, S. (2004). The history of autism. *European child & adolescent psychiatry*, 13, 201-208.
- Yates, T. M., Gregor, M. A., & Haviland, M. G. (2012). Child maltreatment, alexithymia, and problematic internet use in young adulthood. *Cyberpsychology, Behavior and Social Networking*, 15(4), 219–225.
- Yilmaz, O., Mircik, A., Kunduz, M., Combas, M., Ozturk, A., Deveci, E., & Kirpinar, I. (2019). Does psychotherapy improve alexithymia? A comparison study among patients with mild or moderate depression. *Revista de Psiquiatria Clinica*, 46(6), 156-164.
- Youngs, D., & Canter, D. V. (2013). Offenders' crime narratives as revealed by the narrative roles questionnaire. *International Journal of Offender Therapy and Comparative Criminology*, 57(3), 289-311.
- Yousefi, H., Rammazi, M., Abolghasemi, A., & Divsalar, K. (2019). Effects of self-control training on emotional wellbeing and opioid craving among men with opioid use disorder. *Iranian Journal of Psychiatry and Behavioral Sciences*, 13(1).
- Youssef, L., Hallit, R., Kheir, N., Obeid, S., & Hallit, S. (2020). Social media use disorder and loneliness: Any association between the two? Results of a cross-sectional study among Lebanese adults. *BMC Psychology*, 8(1), 56-.
- Zahradnik, M., Stewart, S. H., Marshall, G. N., Schell, T. L., & Jaycox, L. H. (2009). Anxiety sensitivity and aspects of alexithymia are independently and uniquely associated with posttraumatic distress. *Journal of traumatic stress*, 22(2), 131–138.

Zimmermann, G. (2006). Delinquency in male adolescents: The role of alexithymia and family structure. *Journal of Adolescence*, 29(3), 321–332.

Zlotnick, C., Mattia, J. I., & Zimmerman, M. (2001). The relationship between posttraumatic stress disorder, childhood trauma and alexithymia in an outpatient sample. *Journal of Traumatic Stress*, 14(1), 177–188.

Zorzella, K. P. M., Muller, R. T., Cribbie, R. A., Bambah, V., & Classen, C. C. (2019). The role of alexithymia in trauma therapy outcomes: Examining improvements in PTSD, dissociation, and interpersonal problems. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(1), 20.

Appendices

A1. Original Narrative Questionnaire

PTSD, Trauma and Stress

1. Have you ever had a serious accident at work, in a car, or somewhere else?
2. Have you ever experienced a natural disaster such as a tornado, hurricane, flood or major earthquake, etc., where you felt you or your loved ones were in danger of death or injury?
3. Have you ever been exposed to dangerous chemicals or radioactivity that might threaten your health?
4. Have you ever been in any other situation in which you feared you might be killed or seriously injured?
5. Have you ever seen someone seriously injured or killed?
6. Have you ever seen dead bodies (other than at a funeral) or had to handle dead bodies for any reason?
7. Have you ever had a spouse, romantic partner, or child die?
8. Have you ever had a serious or life-threatening illness?
9. Have you ever received news of a serious injury, life-threatening illness, or unexpected death of someone close to you?
10. Have you ever had to engage in combat e.g police force, military, navy or in an official or unofficial war zone?
11. Have there been any situations in which another person tried to force you to have an unwanted sexual contact?
12. Has anyone, including family members or friends, ever attacked you with or without a weapon and seriously injured you?
13. Have you experienced any other extraordinarily stressful situation or event that is not covered above?
14. Do you ever relive or re-experience a traumatic or negative event?
15. Are you aware of any unexplained missing or blank periods of time in your memory?
16. Do you struggle to unwind or relax?
17. Do you find yourself getting upset easily and overwhelmed by tasks or responsibilities?

Offending, Violent and anti-social behaviour

1. Are you now or have you ever been in a relationship in which you have been physically violent or threatening towards your partner?
2. Have you ever been physically violent or threatening towards someone other than an intimate partner?
3. Have you ever been convicted or charged with a violent offence?
4. Have you ever been given a warning, cautioned, convicted or been charged with any offence relating to anti-social behaviour?

5. Have you ever been cautioned, charged or convicted of any offence other than the ones detailed above (excluding driving offences)?
6. Have you ever received a prison sentence for any offence?
7. Do you consider yourself to be intimidating or someone "not to be messed with"?
8. Do you often get into physical or verbal fights with others?
9. Do you find it hard to control your temper when you get angry?
10. Have you ever tried to cause someone emotional harm or physical harm?
11. Have you ever broken or damaged items when angry or upset?
12. Have you ever intentionally caused harm or distress to a wild animal or pet?

Addiction

1. Have you used drugs other than those required for medical reasons?
2. If yes, are you always able to stop using those drugs when you want to?
1. Do you now or have you ever consumed alcohol 3-4 times a week or more?
2. Do you now or have you ever consumed 5 or more drinks at a time?
3. Do you now or have you ever felt unable to stop drinking once you have started?
4. Has any friend, professional or family member raised concerns that you may be alcohol dependent?
5. Have you ever had medical issues brought on by drugs or alcohol?
6. Have you ever run out of a prescription before you should have?
7. Have you ever missed time at school/work due to drugs/alcohol?
8. Do you ever gamble?
9. Do you struggle to get through the week without participating in gambling?
10. Have you ever neglected responsibilities for drugs/alcohol/gambling?
11. Have you ever gambled to pay off debts or escape financial difficulty?

Parenting

1. During your childhood did any of your primary care givers ever beat, smack, or push you hard enough to cause injury?
2. During your childhood did any of your primary care givers belittle or criticise you regularly?
3. During your childhood were your basic needs deliberately withheld such as access to food, water, and shelter?
4. Did at least one of your primary care givers show love and affection through hugs, kisses and reaffirming phrases such as "I Love you"?
5. During your childhood were you ever in the care of the Local authority or foster care?
6. Did your primary care givers implement boundaries when you were growing up?

7. During your childhood and adolescence did your primary care givers attempt to excessively control your behaviour and the way that you lived your life?
8. Would you describe your parents as overprotective?
9. Did your parents respect your privacy and personal space?
10. Have you ever felt you need to lie to avoid parental disapproval and punishment?
11. Were you able to choose your own style growing up? e.g. clothes, hair style & colour etc.
12. Were you restricted from consuming any age-appropriate media, such as books, movies, TV shows, whilst growing up?
13. Would you describe your parents as stricter than the parents of your friends?
14. Were you responsible for cleaning up and taking care of your own mess? e.g. chores, cleaning your room
15. When going out were you required to check-in regularly with parents?

Depression, Self-harm, and Suicidality

1. Has anyone in your immediate family been diagnosed with depression?
2. Have you ever been diagnosed with depression?
3. Has anyone in your immediate family committed suicide?
4. Have you ever attempted suicide?
5. Have you had thoughts of harming yourself?
6. Have you ever had suicidal thoughts?
7. Has anyone in your immediate family ever self-harmed?
8. Have you ever intentionally caused yourself physical harm?
9. Do you ever feel hopeless about the present or future?
10. Do you have little interest or pleasure in doing things you used to enjoy?
11. Do you regularly experience feelings or hopelessness?

Psychiatric, Eating and Sleep disorder

1. Has anyone in your immediate family been diagnosed with an autistic spectrum condition?
2. Have you ever been diagnosed with an autistic spectrum condition?
3. Has anyone in your immediate family been diagnosed with Attention Deficit Hyperactivity Disorder?
4. Have you ever been diagnosed with Attention Deficit Hyperactivity Disorder?
5. Has anyone in your immediate family been diagnosed with an anxiety disorder e.g generalised anxiety, obsessive compulsive disorder, post-traumatic stress disorder or phobias?
6. Have you ever been diagnosed with an anxiety disorder e.g generalised anxiety, obsessive compulsive disorder, post-traumatic stress disorder or phobias?
7. Has anyone in your immediate family been diagnosed with a mood disorder e.g Major Depression or bipolar disorder?

8. Have you ever been diagnosed with a mood disorder e.g Major Depression or bipolar disorder?
9. Has anyone in your immediate family been diagnosed with a psychotic disorder e.g schizophrenia, schizoaffective disorder, or psychosis?
10. Have you ever been diagnosed with a psychotic disorder e.g schizophrenia, schizoaffective disorder, or psychosis?
11. Has anyone in your immediate family been diagnosed with a personality disorder e.g anti-social personality disorder, borderline personality disorder or avoidant personality disorder?
12. Have you ever been diagnosed with a personality disorder e.g anti-social personality disorder, borderline personality disorder or avoidant personality disorder?
13. Has anyone in your family ever been diagnosed with an eating disorder e.g anorexia nervosa, Bulimia nervosa, PICA or binge eating disorder?
14. Have you ever been diagnosed with an eating disorder e.g anorexia nervosa, Bulimia nervosa, PICA or binge eating disorder?
15. Do you regularly find yourself eating until you feel sick?
16. Have you ever intentionally thrown-up after eating too much?
17. Do you regularly restrict your food or overeat regardless of hunger?
18. Have you ever been diagnosed with a sleep disorder?
19. Do you regularly struggle to sleep at night despite being tired?
20. Do you regularly wake up in the night, unable to go back to sleep?
21. Do you ever fall asleep at inappropriate times?
22. Are you likely to fall asleep when inactive, regardless of whether you are tired?
23. Would you or your friends describe you as impulsive?
24. Have you ever heard things or seen things that aren't there without the influence of drugs or alcohol?
25. Do people ever disagree with concerns you have and call you paranoid?

Treatment

1. Has a friend or family member ever encouraged you to speak with a professional regarding your mental health and wellbeing, but you decided not to?
2. Would you feel confident accessing therapeutic support services if you needed them?
3. If you needed to access therapeutic support services, would you feel comfortable discussing your concerns openly with a support worker, therapist, psychologist, or psychiatrist?
4. Have you ever accessed support services for your mental health and wellbeing but then disengaged or wanted to disengage because you struggled to build a relationship with the person supporting you e.g support worker, therapist, psychologist, psychiatrist or probation officer (if you have never accessed support services please respond No)?
5. Have you ever accessed support services for your mental health and wellbeing but felt that the treatment on offer was not beneficial to you (if you have never accessed support services please respond No)?

A2 Perth Alexithymia Questionnaire

PAQ

Name:

Date:

This questionnaire asks about how you perceive and experience your emotions. Please score the following statements according to **how much you agree or disagree that the statement is true of you**. Circle one answer for each statement.

Some questions mention *bad* or *unpleasant* emotions, this means emotions like sadness, anger, or fear. Some questions mention *good* or *pleasant* emotions, this means emotions like happiness, amusement, or excitement.

	Strongly disagree	---	---	Neither agree nor disagree	---	---	Strongly agree	
1	When I'm feeling <i>bad</i> (feeling an unpleasant emotion), I can't find the right words to describe those feelings.	1	2	3	4	5	6	7
2	When I'm feeling <i>bad</i> , I can't tell whether I'm sad, angry, or scared.	1	2	3	4	5	6	7
3	I tend to ignore how I feel.	1	2	3	4	5	6	7
4	When I'm feeling <i>good</i> (feeling a pleasant emotion), I can't find the right words to describe those feelings.	1	2	3	4	5	6	7
5	When I'm feeling <i>good</i> , I can't tell whether I'm happy, excited, or amused.	1	2	3	4	5	6	7
6	I prefer to just let my feelings happen in the background, rather than focus on them.	1	2	3	4	5	6	7
7	When I'm feeling <i>bad</i> , I can't talk about those feelings in much depth or detail.	1	2	3	4	5	6	7
8	When I'm feeling <i>bad</i> , I can't make sense of those feelings.	1	2	3	4	5	6	7
9	I don't pay attention to my emotions.	1	2	3	4	5	6	7
10	When I'm feeling <i>good</i> , I can't talk about those feelings in much depth or detail.	1	2	3	4	5	6	7
11	When I'm feeling <i>good</i> , I can't make sense of those feelings.	1	2	3	4	5	6	7
12	Usually, I try to avoid thinking about what I'm feeling.	1	2	3	4	5	6	7

		Strongly disagree	---	---	Neither agree nor disagree	---	---	Strongly agree
13	When something <i>bad</i> happens, it's hard for me to put into words how I'm feeling.	1	2	3	4	5	6	7
14	When I'm feeling <i>bad</i> , I get confused about what emotion it is.	1	2	3	4	5	6	7
15	I prefer to focus on things I can actually see or touch, rather than my emotions.	1	2	3	4	5	6	7
16	When something <i>good</i> happens, it's hard for me to put into words how I'm feeling.	1	2	3	4	5	6	7
17	When I'm feeling <i>good</i> , I get confused about what emotion it is.	1	2	3	4	5	6	7
18	I don't try to be 'in touch' with my emotions.	1	2	3	4	5	6	7
19	When I'm feeling <i>bad</i> , if I try to describe how I'm feeling I don't know what to say.	1	2	3	4	5	6	7
20	When I'm feeling <i>bad</i> , I'm puzzled by those feelings.	1	2	3	4	5	6	7
21	It's not important for me to know what I'm feeling.	1	2	3	4	5	6	7
22	When I'm feeling <i>good</i> , if I try to describe how I'm feeling I don't know what to say.	1	2	3	4	5	6	7
23	When I'm feeling <i>good</i> , I'm puzzled by those feelings.	1	2	3	4	5	6	7
24	It's strange for me to think about my emotions.	1	2	3	4	5	6	7

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A3 Perth Alexithymia Questionnaire – Short Form

PAQ-S

Name:

Date:

This questionnaire asks about how you perceive and experience your emotions. Please score the following statements according to **how much you agree or disagree that the statement is true of you**. Circle one answer for each statement.

Some questions mention *bad* or *unpleasant* emotions, this means emotions like sadness, anger, or fear. Some questions mention *good* or *pleasant* emotions, this means emotions like happiness, amusement, or excitement.

		Strongly disagree	---	---	Neither agree nor disagree	---	---	Strongly agree
1	When I'm feeling <i>bad</i> (feeling an unpleasant emotion), I can't find the right words to describe those feelings.	1	2	3	4	5	6	7
2	When I'm feeling <i>bad</i> , I can't tell whether I'm sad, angry, or scared.	1	2	3	4	5	6	7
3	I tend to ignore how I feel.	1	2	3	4	5	6	7
4	When I'm feeling <i>good</i> (feeling a pleasant emotion), I can't find the right words to describe those feelings.	1	2	3	4	5	6	7
5	When I'm feeling <i>good</i> , I can't tell whether I'm happy, excited, or amused.	1	2	3	4	5	6	7
6	I don't pay attention to my emotions.	1	2	3	4	5	6	7

A4 Alexithymia Narrative Screening tool

PAQ – Short Form

1= Strongly Agree...2...3...4 =Neither agree nor disagree 5...6...7= Strongly disagree

	Please report the response as a numerical score 1-7
When I'm feeling bad (feeling an unpleasant emotion), I can't find the right words to describe those feelings.	
When I'm feeling bad, I can't tell whether I'm sad, angry, or scared.	
I tend to ignore how I feel.	
When I'm feeling good (feeling pleasant emotion), I can't find the right words to describe those feelings	
When I am feeling good, I can't tell whether I'm happy, excited, or amused.	
I don't pay attention to my emotions.	

Total score:

6 – 10

11 – 26

27 - 42

Low Alexithymia

Average Alexithymia

High Alexithymia

If the total score is between 11 – 42 please proceed to the next set of questions.




A5 Narrative Profile Questions

The next set of questions require only a yes, no or omit response

	Y = Yes / N = No / O = Omit	Present	
ADDICTION			
Have you used drugs other than those required for medical reasons, and if so, do you feel unable to stop using them once you have started?			▲
Have you ever run out of a prescription before you should have?			★
Have you ever gambled to pay off debt or escape financial difficulty?			●
Have you ever missed time at school/work due to drugs/alcohol?			★
Clinical Factors			
Has anyone in your immediate family been diagnosed with ADHD?			▲
Has anyone in your immediate family committed suicide?			▲
Has anyone in your immediate family been diagnosed with a psychotic disorder e.g			●
Have you ever been diagnosed with attention deficit hyperactivity disorder?			●
Have you ever intentionally caused yourself physical harm?			★

Do you regularly experience feelings or hopelessness?			★
Offending			
Do you often get into physical or verbal fights with others?			▲
Do you consider yourself intimidating or “someone not to be messed with”?			●
Have you ever been in a relationship in which you have been physically violent or threatening towards a partner?			★
Have you ever been given a warning, cautioned, convicted, or been charged with any offence relating to anti-social behaviour?			●
Have you ever been cautioned, charged, or convicted of any offence (excluding driving offences)?			●
Have you ever received a prison sentence for any offence?			●

Scoring

		Total Score	Total Value	Percentage
	The Alexithymic		4	%
	The Compromised Child		5	%
	The Compromised adult		7	%

Divide the total score by the total value and then times that number by 100 to give you a percentage. For example, if a person's total score in the Alexithymic narrative is 4 the equation will be as follows: $4 \text{ divide } 7 = 0.57142857 \times 100 = 57.1428571$. You can then use the number before the decimal point as your percentage. In this case it will be 57 %.

A6 Summary of Narratives

The Compromised Child

People that fall within this narrative may likely have had negative experiences in childhood. They may have experienced excessive control by their parents, been overprotected, or experienced emotional/physical abuse. There are two elements of Alexithymia that may be more difficult for people falling into this category. These include “difficulty defining negative feelings” and “difficulty defining general feelings”. This suggests that they may be able to recognise their feelings but struggle to attach a label to them. For example, they may experience the physical sensations of emotions such as “butterflies” in their stomach when anxious, but fail to realise that this physical sensation is caused by anxiety. Those who fall within this narrative may likely benefit from trauma informed interventions, and these interventions may be complimented by the incorporation of strategies aimed to develop their ability to label their feelings more effectively. This could include asking them to talk about the physical symptoms they are experiencing and assisting them to attach a label to these sensations.

The Compromised Adult

People that fall within this narrative may have an increased risk of excessive alcohol consumption. Excessive alcohol consumption is also associated with emotional processing difficulties, poor impulse control, and attention difficulties. Those who fall within this category may have had difficulties in their adult lives possibly experiencing addiction, violence, later life trauma, and have other

diagnosed/undiagnosed mental health conditions. This narrative is associated with “difficulty identifying negative feelings” and “difficulty defining positive feelings”. This indicates that a person falling into this category may struggle to recognise any difficult emotions they may be experiencing. For example, they may think that they are angry with a certain situation or event, when in reality they are feeling sad about that situation/event. They also may struggle to verbalise positive emotions when things are going well for them. If an individual is identified as fitting within this narrative, they may benefit from therapeutic input that assists them in accurately identifying their negative feelings and encouraging them to verbalise any positive feelings they have. It is important to note that people who fall within this narrative may have had difficulties building up relationships with professionals in the past. One of the reasons for this may be that professionals have previously assumed that this individual can reflect upon their own feelings and emotions during therapeutic interventions. However, given their Alexithymic traits they have struggled to do this effectively, resulting in professionals believing that they do not want to access support or that they are “saying the right things” but not necessarily “doing the right things”.

The Alexithymic

Individuals who fall within this category may have a diagnosed/undiagnosed Autistic Spectrum Condition. Individuals who are on the Autistic spectrum are significantly more likely to experience symptoms of Alexithymia, with research indicating that co-morbid Alexithymia is "common", but not "universal" in this population. However, those falling into this narrative may also have had difficulties with "drug addiction". If

a person within this category has experienced drug addiction, it may be possible that they have previously used substances to enable them to “feel”. This is because those who have full spectrum Alexithymia may struggle to recognise, understand, and process their emotions as effectively as others. Therefore, taking substances induces a “feeling” that they may otherwise struggle to experience naturally. It is important to note that those within this category may have had both positive and negative life experiences. However, it is likely that if they have experienced negative life events, they will have struggled to process or overcome those events to the same capacity as others, through no fault of their own. They may also struggle to access standardised therapies and will need increased support in all areas of their emotional wellbeing. This will include assisting them to distinguish, recognise and verbalise their emotions effectively.

Does the responder feel that this narrative accurately describes them?

Please circle their response below:

- 1 = Strongly Agree
- 2 = Agree
- 3 = Neutral
- 4 = Disagree
- 5 = Strongly disagree

A7 Semi-Structured Interview Schedule

Interview Schedule for semi-structured interviews in phase 3

Welcome the Keyworker Request verbal consent again.

Explain that the interview is being recorded. Refer to information sheet and remind them of their right to withdraw.

Can you tell me how long you have been a therapist for?

How long have you been a therapist at the Burton Addiction centre?

Start with reading the clients and each narrative they fell into.

What are your views surrounding the narratives pertaining to the screening tool for example did you find them easy or difficult to understand?

When considering the narratives, do you feel that they are beneficial to your understanding of the service user, and can you give examples to substantiate your response? Can you give me any examples of how the screening tool was incorporated into your care planning for service users?

Did you have any apprehensions surrounding applying the narratives to the client if so, can you describe why or give any examples?

Can you describe for me any benefits you have observed from using the screening tool in terms of treatment outcomes?

Can you describe for me any limitations you have observed from applying the narratives?

If given the choice, would you wish to continue using the screening tool within your setting and regardless of your answer can you explain the reasons why?

Do you feel that the screening tool assisted in identifying any possible risks associated with the service users and if so, can you give any examples of this?

Reflecting on your experiences, do you feel the screening tool was able to identify any barriers that service users may have had in their engagement with you and the service, if so, can you give any examples?

Did the screening tool assist you to identify differences between service users and if so, are there any examples you can give as to how you may have changed your approach with them based on the information it provided?

Thank the Keyworker for their time. Provide a verbal debrief, provide contact information again.

Remind them of the withdrawal period.

A8 Reflective Questionnaire

Read over the transcript and make some notes on your initial thoughts of the transcript. Below are some questions to help you do this. You do not have to answer all of these questions – you don't have to answer any of them if you don't want, they're just there as a guide. Just make some notes of what comes into your head when you're reading the transcript for the first time. Do not attempt to code the transcript until you have done this. Do not worry about your notes being 'messy'. They do not need to be fully developed ideas, simply thoughts that enter your head whilst reading the transcript. If you would prefer, you do not have to share these notes with me, so please be as honest and as raw as you can when making these notes. If you feel you need to read over the transcript a second time before coding then please feel free to do so.

1. How did the transcript make you feel?
2. What jumps out at you?
3. What surprised me?
4. What intrigued me?
5. What disturbed me?
6. What is this participant trying to accomplish? Why do they think their story is worth communicating?
7. Anything that resonates with your own experiences?
8. Anything that is very different from your own experiences?
9. Anything that you feel particularly critical of?
10. Anything you feel supportive of?
11. Any theories for how this transcript answers the research questions?
12. How 'common-sense' is their story?
13. How would you feel if you were in that situation? Is this different from or similar to how the participant feels and why might that be?
14. How does the participant make sense of the topic discussed? (e.g. talk about, characterise and understand what is going on)?
15. Why might they be making sense of their experiences in this way (and not another way)?
16. In what different ways do they make sense of the topic discussed?
17. What does the transcript tell you about the interview as an interactive process? E.g. are there moments when the interviewer / participant experiences strong emotions or sensations (e.g. relief, confusion, irritation, sweating, tightening of the stomach, uneasiness, anger etc.)? What might be going on there?
18. What assumptions is the participant making?
19. What do you see going on here?
20. What did you learn from this interview?

A9 Content Dictionary

Full Question	Analysis Label	Full Question	Analysis Label
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Have you ever had a serious accident at work, in a car, or somewhere else?	Serious_Accident	Do you now or have you ever consumed alcohol 3-4 times a week or more?	Weekly_excessive_alcohol
Have you ever experienced a natural disaster such as a tornado, hurricane, flood or major earthquake, etc., where you felt you or your loved ones were in danger of death or injury?	Natural_disaster	Do you regularly consume 5 or more drinks at a time?	Daily_excessive_alcohol
Have you ever been exposed to dangerous chemicals or radioactivity that might threaten your health?	Ex_Chem	Do you now or have you ever felt unable to stop drinking once you have started?	Alcohol_addiction
Have you ever been in any other situation in which you feared you might be killed or seriously injured?	Fear_Death_Injury	Has any friend, professional or family member raised concerns that you may be alcohol dependent?	Concerns_Alcohol_Consumption
Have you ever seen someone seriously injured or killed?	Seen_death_injury	Have you ever had medical issues brought on by drugs or alcohol?	Substance_Related_Medical
Have you ever seen dead bodies (other than at a funeral) or had to handle dead bodies for any reason?	Seen_hand_bodies	Have you ever run out of a prescription before you should have?	Overused_prescription
Have you ever had a spouse, romantic partner, or child die?	Spouse_child_death	Have you ever missed time at school/work due to drugs/alcohol?	Missed_commitments_substances
Have you ever had a serious or life-threatening illness?	Life_threatening_illness	Do you ever gamble?	Gambling
Have you ever received news of a serious injury, life-threatening illness, or unexpected death of someone close to you?	Unexpected_Death_Illness_Injury	Do you struggle to get through the week without participating in gambling?	Excessive_gambling
Have you ever had to engage in combat e.g police force, military, navy or in an official or unofficial war zone?	Engaged_combat	Have you ever neglected responsibilities for drugs/alcohol/gambling	Neglected_respon_substance
Have there been any situations in which another person tried to force you to have an unwanted sexual contact?	Unwanted_sexual_contact	Have you ever gambled to pay off debts or escape financial difficulty	Gambled_pay_debt
Has anyone, including family members or friends, ever attacked you with or without a weapon and seriously injured you?	Physical_Assault	During your childhood did any of your primary care givers ever beat, smack, or push you hard enough to cause injury?	Childhood_Physical_Abuse
Have you experienced any other extraordinarily stressful situation or event that is not covered above? (If yes, please specify. However, please note that you are under no obligation to respond, and you do not need to elaborate any further than a few words during your response)	Extraordinarily_Stressful_Event	During your childhood did any of your primary care givers belittle or criticise you regularly?	Childhood_Emotional_abuse
Do you ever relive or re-experience a traumatic or negative event?	Relive_trauma	During your childhood were your basic needs deliberately withheld such as access to food, water, and shelter?	Childhood_neglect
Are you aware of any unexplained missing or blank periods of time in your memory?	Memory_blanks	Did at least one of your primary care givers show love and affection through hugs, kisses and reaffirming phrases such as "I Love you"?	Shown_love_childhood
Do you struggle to unwind or relax?	Struggle_to_unwind	During your childhood were you ever in the care of the Local authority or foster care?	Care_leaver
Do you find yourself getting upset easily and	Easily_Overwhelmed	Did your primary care givers implement boundaries when you were growing up?	Childhood_boundaries

overwhelmed by tasks or responsibilities?			
Are you now or have you ever been in a relationship in which you have been physically violent or threatening towards your partner?	Perpertrator_IPV	During your childhood and adolescence did your primary care givers attempt to excessively control your behaviour and the way that you lived your life?	Strict_parents
Have you ever been physically violent or threatening towards someone other than an intimate partner?	History_violence	Would you describe your parents as overprotective?	Overprotected_childhood
Have you ever been convicted or charged with a violent offence?	Conviction_charge_violence	Did your parents respect your privacy and personal space?	Childhood_boundaries
Have you ever been given a warning, cautioned, convicted or been charged with any offence relating to anti-social behaviour?	History_antisocial_behaviour	Have you ever felt you need to lie to avoid parental disapproval and punishment?	Lied_avoid_parental_dissapproval
Have you ever been cautioned, charged or convicted of any offence other than the ones detailed above (excluding driving offences)?	History_offending	Were you able to choose your own style growing up? e.g. clothes, hair style & colour etc.	Able_to_Choose_Own_Style
Have you ever received a prison sentence for any offence?	Received_custodial_sentence	Were you restricted from consuming any age-appropriate media, such as books, movies, TV shows, whilst growing up?	Restricted_childhood
Do you consider yourself to be intimidating or someone "not to be messed with"?	Considers_self_intimidating	Would you describe your parents as stricter than the parents of your friends?	Strict_Parents
Do you often get into physical or verbal fights with others?	Frequent_verbal_physical_fights	Were you responsible for cleaning up and taking care of your own mess? e.g. chores, cleaning your room	Responsibilities_childhood
Do you find it hard to control your temper when you get angry?	Anger_management_difficulties	When going out were you required to check-in regularly with parents?	Parents_displayed_concern_wellbeing
Have you ever tried to cause someone emotional harm or physical harm?	Caused_physical_emotional_harm	Has anyone in your immediate family been diagnosed with depression?	Family_depression
Have you ever broken or damaged items when angry or upset?	Damaged_Items_Anger	Have you ever been diagnosed with depression?	Depression
Have you ever intentionally caused harm or distress to a wild animal or pet?	Harm_to_Animals	Has anyone in your immediate family committed suicide?	Family_history_suicide
Have you used drugs other than those required for medical reasons?	Used_illicit_substances	Have you ever attempted suicide?	Attempted_suicide
Are you always able to stop using those drugs when you want to?	Drug_addiction	Have you had thoughts of harming yourself?	Thoughts_self_harm
Have you ever had suicidal thoughts?	Suicidal_thoughts	Would you feel confident accessing therapeutic support services if you needed them?	Confident_accessing_support
Has anyone in your immediate family ever self-harmed?	Family_history_self_harm	If you needed to access therapeutic support services, would you feel comfortable discussing your concerns openly with a support worker, therapist, psychologist, or psychiatrist?	Comfortable_discussing_MH
Have you ever intentionally caused yourself physical harm?	Intentionally_caused_self_harm	Have you ever accessed support services for your mental health and wellbeing but then disengaged or wanted to disengage because you struggled to build a relationship with the person supporting you e.g support worker, therapist, psychologist, psychiatrist or probation officer (if you have never accessed support services please respond No)?	Fractured_therapeutic_relationships

Do you ever feel hopeless about the present or future?	Occasional_feelings_hopelessness	Have you ever accessed support services for your mental health and wellbeing but felt that the treatment on offer was not beneficial to you (if you have never accessed support services please respond No)?	Felt_support_unbeneficial
Do you have little interest or pleasure in doing things you used to enjoy?	Loss_of_Pleasure	Do you regularly experience feelings or hopelessness?	Regular_feelings_hopelessness
Has anyone in your immediate family been diagnosed with an autistic spectrum condition?	Family_History_ASD	Have you ever been diagnosed with an autistic spectrum condition?	ASD
Have you ever been diagnosed with Attention Deficit Hyperactivity Disorder?	ADHD	Has anyone in your immediate family been diagnosed with Attention Deficit Hyperactivity Disorder?	Family_history_adhd
Has anyone in your immediate family been diagnosed with an anxiety disorder e.g generalised anxiety, obsessive compulsive disorder, post-traumatic stress disorder or phobias?	Family_history_anxiety	Have you ever been diagnosed with an anxiety disorder e.g	Anxiety_disorder
Did your parents respect your privacy and personal space?	Lacked_privacy_childhood	Has anyone in your immediate family been diagnosed with a mood disorder e.g Major Depression or bipolar disorder?	Family_mood_disorder
Have you ever been diagnosed with a mood disorder e.g Major Depression or bipolar disorder?	Mood_disorder	Has anyone in your immediate family been diagnosed with a psychotic disorder e.g schizophrenia, schizoaffective disorder, or psychosis?	Family_history_psychotic_disorder
Have you ever been diagnosed with a psychotic disorder e.g schizophrenia, schizoaffective disorder, or psychosis	Psychotic_disorder	Has anyone in your immediate family been diagnosed with a personality disorder e.g anti-social personality disorder, borderline personality disorder or avoidant personality disorder?	Family_history_personality_disorder
Have you ever been diagnosed with a personality disorder e.g anti-social personality disorder, borderline personality disorder or avoidant personality disorder?	Personality_disorder	Has anyone in your family ever been diagnosed with an eating disorder e.g anorexia nervosa, Bulimia nervosa, PICA or binge eating disorder?	Family_history_eating_disorder
Have you ever been diagnosed with an eating disorder e.g anorexia nervosa, Bulimia nervosa, PICA or binge eating disorder?	Eating_disorder	Do you regularly find yourself eating until you feel sick?	Symptoms_overeating
Have you ever intentionally thrown-up after eating too much?	Symptoms_bulimia	Do you regularly overeat or undereat regardless of hunger?	Eating_disorder
Have you ever been diagnosed with a sleep disorder?	Diagnosed_Sleep_disorder	Do you regularly struggle to sleep at night despite being tired?	Struggle_to_sleep
Do you regularly wake up in the night, unable to go back to sleep?	Frequently_Wakes_Night	Do you ever fall asleep at inappropriate times?	Falls_Asleep_Inappropriate_Times
Are you likely to fall asleep when inactive, regardless of whether you are tired?	Falls_asleep_inactive	Would you or your friends describe you as impulsive?	Impulsivity
Have you ever heard things or seen things that aren't there without the influence of drugs or alcohol?	Hallucination_symptoms	Do people ever disagree with concerns you have and call you paranoid?	Symptoms_paranoid
Has a friend or family member ever encouraged you to speak with a professional regarding your mental health and wellbeing, but you decided not to?	Encouraged_seek_MH_support		

A10 Additional tables pertaining to chapter 5

Table Ch5.1 Scales of Criminal Narrative Experience Themes.

Theme	Number of Items	Cronbach's α
The Compromised Child	18	0.87
The Compromised Adult	35	0.96
The Nurtured Child	16	0.89
The Warrior	12	0.88
The Alexithymic	27	0.95

Table App Ch5.2 Number of cases assigned to each Narrative.

Theme	Number of Items	Percentage
The Compromised Child	34	20.99
The Compromised Adult	40	24.69
The Nurtured Child	27	16.67
The Warrior	20	12.35
The Alexithymic	26	16.05
The Compromised Child -The Alexithymic	6	3.70
The Compromised Adult – The Alexithymic	9	5.55

RESEARCH ARTICLE

Alexithymia: A Narrative Approach to Understanding an Alexithymic Profile

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ABSTRACT

This paper examines the relationship between Alexithymia and a variety of environmental, genetic, and biological influences. A narrative questionnaire incorporating 98 variables believed to be associated with Alexithymia was employed to gain responses from 82 participants in a non-clinical sample and 80 participants in a clinical sample. A smallest space analysis was used to analyze the responses and identify any narratives associated with Alexithymia. The results revealed five narratives, The Compromised Child, The Compromised Adult, The Warrior, The Nurtured Child and The Alexithymic. The findings provide useful insights into who is most at risk of Alexithymia, what environmental factors may exacerbate it, and how to create more effective treatment pathways.

1 | Introduction

Alexithymia refers to difficulties in emotional processing, encompassing four key areas: difficulty identifying feelings (DIF), difficulty describing feelings (DDF), difficulty appraising feelings (DAF), and externally oriented thinking (EOT) (Taylor and Bagby 2004). Prevalence estimates suggest rates between 5% and 17% in non-clinical cohorts (Lichev et al. 2014) and as high as 45% in clinical cohorts (Nicolò et al. 2011). The significance of this research area is underscored by its association with adverse life outcomes, including addictive tendencies, criminal behavior, self-injurious, and suicidal behaviors (Khodami and Sheibani 2020; De Berardis et al. 2008; Di Schiena et al. 2011; Battista et al. 2021; Bianchini et al. 2019; Byrne et al. 2016; Engelstad et al. 2019).

First identified in 1973, Alexithymia led to the development of various screening tools (Sifneos 1973). The TAS-20, the most widely used tool, shows higher Alexithymia levels in clinical cohorts compared to control groups (Davis 2022). Additionally,

studies have found higher Alexithymia scores among individuals with substance misuse and offending backgrounds than in other clinical samples, leading to investigations into its potential role in addictive behavior. Hypotheses propose that Alexithymics engage in addictive activities to enhance positive affect, cope with negative affect, increase arousal, and facilitate social interactions (Hamidi et al. 2010).

The TAS-20 offers insights into the various components of Alexithymia and their associations with other variables (Leising et al. 2009). For instance, Saladin et al. (2012) found that only two components, DIF and DDF, were linked to fractured relationships with key workers and therapists in Alexithymic populations. This finding raises concerns about the potential barriers to accessing treatment services for individuals with Alexithymia, as therapy often involves emotional reflection. However, despite these benefits, some researchers have questioned the suitability of the TAS-20 (Dorard et al. 2008; Thorberg et al. 2009, 2010). Issues have been raised regarding its factorial validity and reliability, with certain items showing non-