ELLEN HUGHES

PROFESSIONAL DOCTORATE IN HEALTH PSYCHOLOGY

UNIVERSITY OF STAFFORDSHIRE

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Abstract

Ellen Hughes, Professional Doctorate in Health Psychology 2025

This portfolio showcases the work I have completed as part of my Professional Doctorate in Health Psychology at the University of Staffordshire. It highlights my learning, research, and practical experience, demonstrating the key skills and knowledge I have developed throughout the Doctorate.

The portfolio is divided into five chapters, each focusing on a required competency. The first chapter covers professional competence, looking at ethical practice, self-reflection, and professional development. The second chapter focuses on advanced research methods, explaining the research projects I have conducted and the methods I used. The third chapter explores psychological interventions, describing how I designed, implemented, and evaluated different strategies to improve health and well-being for an individual and group. The fourth chapter is about teaching in health psychology, sharing my experience in conducting teaching as a trainee health psychologist. The final chapter highlights my consultancy skills, showing how I have applied psychological knowledge, negotiated a contract and delivered a piece of consultancy for a client.

Each chapter includes written reports and reflections on my experiences, discussing the challenges I faced, how I handled them, and what I learned along the way.
The work in this portfolio was completed while I was working at a Further Education college and subsequently at an Innovation service in the NHS. Between 2019 and 2025, I was involved in a range of research and practical projects, helping me apply what I learned in a real-world setting.

This portfolio reflects my journey and reflections throughout the Professional Doctorate, highlighting my development and growth as a Trainee Health Psychologist over the past 5 years.

Introduction

This portfolio contains written reports of the work completed towards the competencies needed for the Professional Doctorate in Health Psychology at the University of Staffordshire. This Doctorate is focussed on several topics based on the opportunities that I sought out and identified throughout the course of my two distinct placements within an education and health setting. The topics covered in this Doctorate include, technology enhanced care, wellbeing and returning to work following the COVID-19 pandemic, a tailored wellbeing intervention for an individual with Chronic Fatigue Syndrome, allergy research, and consulting on the development of health-based digital applications within a health psychology context.

My Doctorate includes several pieces of work that examine how technology can enhance health and wellbeing, this was largely due to my former roles working in digital health innovation. The topics are broad and encompass several varied aspects of health psychology practice.

Prior to starting the course I had previously worked as a research assistant, trial coordinator, assistant psychologist and project manager and thus had a grasp on some of the research elements involved in the Doctorate. However I had quite limited experience in designing and delivering psychological intervention, these are skills which I honed throughout the course of completing the Doctorate.

Chapter one, titled "Professional Competence in Health Psychology," provides a reflexive account of my development throughout the professional Doctorate. This report outlines how I developed the professional skills necessary to practice as a Health Psychologist, in alignment with professional guidelines and the essential competencies.

Chapter two on advanced research methods contains reports relating to three research projects, each with an accompanying reflective commentary document. The first research project is a systematic review on whether digital behavioural interventions are effective at improving sleep in Adolescents and Young Adults. The

second project is a quantitative research project that examines the relationship between confidence, knowledge and attitudes in individuals with food allergy and the incidence and frequency of these individuals having an allergic reaction when eating outside of the home environment. The final research project explores the experiences of staff working at a further education college before during and after the COVID-19 pandemic and their experiences of transitioning in to and out of lockdown.

Chapter Three provides an account of my work in implementing two distinct psychological interventions, each accompanied by reflective commentaries that explore my experiences, challenges, and insights gained throughout the process. The first intervention focuses on an individual psychological intervention conducted with a college staff member diagnosed with Chronic Fatigue Syndrome (CFS). This section outlines the approach taken, the therapeutic techniques used, and the impact of the intervention on both the individual and my own professional development. The second intervention examines a group wellbeing programme delivered to a cohort of students at a Further Education (FE) institution in the West Midlands. This part of the chapter details the structure and objectives of the intervention, the group dynamics, and the effectiveness of the strategies employed in promoting student wellbeing. Through reflection, I analyse the effectiveness of both interventions, considering theoretical frameworks, ethical considerations, and the practical implications of delivering psychological support in different contexts.

Chapter Four, titled "Teaching in Health Psychology," presents an in-depth exploration of my experience designing and delivering a series of five teaching sessions focused on the theme of "Technology-Enhanced Care." This chapter provides a detailed account of the planning, development, and execution of these sessions, highlighting the pedagogical approaches used to engage learners in the evolving role of technology in healthcare settings. The teaching sessions are examined in terms of the learning objectives, content, teaching methods, and student engagement strategies, as well as the challenges encountered and the ways in which these were addressed.

Finally, Chapter Five presents a reflective account of a consultancy project completed as part of the Doctorate. This work involved negotiating and securing a contract with a client to support the design and preliminary evaluation of a new digital application intended for use in a surgical setting.

In summary, this portfolio demonstrates how I have met the competencies required for the Professional Doctorate in Health Psychology through a wide range of applied experiences across both education and health settings. The work presented reflects the opportunities I identified and engaged with during my placements, and how these shaped the direction of my professional development. Throughout the Doctorate, I have built on my previous experience in research and project work, while significantly developing my skills in psychological intervention, teaching, and consultancy. The portfolio highlights my particular interest in the role of technology in health and wellbeing, as well as my commitment to delivering evidence-based, person-centred support in varied contexts. Overall, the experiences documented here have allowed me to grow into a confident and competent Health Psychologist, equipped to contribute meaningfully to the field.

Table of completion

Module	Date of Completion
Teaching and Training in Health Psychology	July 2020
Psychological Intervention (one to one)	June 2021
Consultancy Skills	January 2022
Systematic Review	June 2022
Psychological intervention (group)	January 2024
Professional Skills in Health Psychology	January 2025
Quantitative Research Project	January 2025
Qualitative Research Project	June 2025

Chapter 1. Professional Competence in Health Psychology

1.1 Reflexive Report

Introduction

In this reflexive report I will look back on my time working and studying as a Health Psychology Trainee, undertaking a Professional Doctorate in Health Psychology at the University of Staffordshire. Detailing how, across two placements, I completed the core competences in requirement of the Doctorate. In addition, I will also describe how I developed the professional skills needed to qualify as a Health Psychologist.

In line with best practice guidance (Gibbs, 1988; Schön, 1983), I kept a weekly reflective diary which has helped me to actively reflect on the events that happened throughout my training. Enabling me to unveil a deeper and more structured insight into the challenges I was facing as a trainee. This diary supported the write up of this reflective report using Driscoll's model of reflection (2007) as I outline each element of my Doctorate journey.

My Professional Doctorate in Health Psychology has taken me longer than originally anticipated having started in 2019 and finished in 2025. As a result of taking a year's maternity leave from September 2022 to September 2023. Getting back into work following a year long hiatus was one of the biggest challenges I faced during the last five years. The Covid-19 pandemic also coincided with the first two years of my Professional Doctorate and significantly impacted on my placement experience, particularly with regards to working practices. I reflect on these challenges and changes throughout this report.

Placement overview

I undertook two different placements while completing the Doctorate. My initial placement was at a Further Education (FE) college in the West Midlands. The college is situated in an area of high deprivation and many of the students are from low-income backgrounds. The college manages high levels of detrimental health behaviours such as vaping, smoking and energy drink consumption. During my time at the college, I worked as part of the student support services but also worked closely with many staff members from different departments.

My second placement was at an arms-length NHS innovation organisation that supports innovation across the health and care system. This role involved assisting the 'pipeline' of innovation, from Public and Patient involvement in product development, research and regulation involved when developing medical devices and understanding the use of health data in research and development. A large part of this role also involved understanding how

innovators and research personnel could better design health innovation to be adopted more readily by clinicians, patients and the public (Excerpt 18).

Both placements required me to use acquired health psychology skills and demonstrate the competences required as outlined in this report.

Professional Guidelines

The Health and Care Professions Council (HCPC) is responsible for regulating health and care professionals in the UK, including those in the roles of Practitioner and Health Psychologists. The HCPC establishes standards to maintain professional conduct, performance, ethics, and proficiency, as well as requirements for Continuing Professional Development (CPD) and education (HCPC, 2022). Throughout my training, I became well-versed in these standards, which played a key role in meeting necessary competences and identifying relevant opportunities that aligned with them, ultimately leading towards registration as a Health Psychologist with the HCPC. The council underscores the importance of staying current with developments in clinical practice and service delivery. Additionally, I adhered to the standards set by the British Psychological Society (BPS), particularly its code of ethics and conduct (BPS, 2021) and its four guiding principles: Respect, Competence, Responsibility and Integrity. I also utilised BPS practice guidelines (BPS, 2017) and the code of human research ethics (BPS, 2021) throughout my training to guide me when facing challenges on placement and beyond.

Given the focus of my first placement, I also familiarised myself with guidelines related to best practices in teaching. The Chartered College of Teaching serves as the professional body responsible for promoting high-quality teaching practices in the UK. It provides teachers with professional development, access to research, and a range of resources that help enhance teaching standards and support educators in their careers. Alongside the Chartered College of Teaching, Ofsted (the Office for Standards in Education, Children's Services, and Skills) plays an important role in ensuring quality teaching and learning by conducting inspections of schools and educational institutions. During my placement, the college underwent an Ofsted inspection, and my work was listed as part of the wellbeing strategy for the college during this inspection which boosted my confidence while on placement at the college.

Core Competences

I completed five core competences through workplace opportunities that I sought out and identified during my time on my placements. Often there was not a perfect fit for each

competency, and I had to find alternative opportunities elsewhere. Since completing these competences, I have recognised and reflected upon the skills I have developed and used them in different areas of my subsequent work.

Professional Competence

During my time as a health psychology trainee, I was able to develop a variety of professional skills through engaging in different experiences. Much of my professional development came from working in a variety of multidisciplinary teams across both placement settings. This was also enhanced by working in complex systems across healthcare and educational settings. I also worked hard on enhancing my reflective practice which further contributed to my professional development. My placements provided several opportunities to apply my new skills to my practice, such as reflection. I made sure to keep a reflective diary which helped when reflecting on challenges and attempting to achieve best practice.

A large part of my development in this competency was of my problem solving and reflective capabilities when experiencing unforeseen or challenging situations with staff and students on placement. Working on placement I often came across problems that needed to be addressed directly and autonomously by me and I utilised these skills to undertake these individual challenges and reflect on my course of action and the subsequent outcome. An example of this was helping the college to understand the purpose and role of a trainee Health Psychologist within a further education college environment. This was a significant challenge and one that I could have addressed more assertively at the beginning of my time on placement. Continuous reflection helped me to understand the confusion of staff and keep boundaries in place to manage my workload whilst on placement. I have transferred the skills developed whilst undertaking the Professional competence into my current workplace and I have noticed that I now often address barriers and challenges in a more thoughtful and reflective way, taking note of my reactions and the situation before acting.

Advanced Research Methods

Reflecting on the learning plan I developed at the beginning of my Professional Doctorate, I now recognise that it would have been more beneficial to begin my empirical research earlier. Planning to complete the research competency towards the end of the Doctorate left me with a substantial workload (Excerpt 14). In hindsight, if I were to start this process again, I would prioritise completing the key pieces of research earlier. This would not only have distributed the workload more evenly but also enabled me to engage with each project more fully and with less pressure and apply learning to later completed competences.

I entered the Doctorate programme with experience in conducting systematic reviews, fully aware of how time-intensive they can be. Due to this knowledge, I began early by identifying topics that aligned with both my interests and the needs of the college. Early on, I engaged with staff at the college to discuss research areas they were interested in, and I noted specific concerns that students frequently brought up during my one-on-one sessions. Based on these discussions, I developed a preliminary list of potential topics and conducted brief literature reviews on some of them to assess their feasibility. At the time, I was particularly interested in the role of digital therapeutics for managing chronic health conditions and promoting healthier behaviours. Many students and staff expressed difficulties with sleep, an issue particularly relevant in the wake of the Covid-19 pandemic, with lockdowns and increased screen time disrupting routines. This led me to explore the effectiveness of digital interventions for improving sleep in adolescents.

Conducting this systematic review during the Covid-19 lockdowns was challenging. Even though I had prior experience with systematic reviews, staying motivated and on track proved difficult in the context of remote work and social isolation. The logistical challenges of accessing resources, coupled with the heightened mental strain many experienced during lockdowns, added complexity to the process (Excerpt 2). Nevertheless, the review was ultimately completed to a good standard, reinforcing my belief in digital health interventions and enhancing my understanding of systematic review methodologies.

My qualitative research began during my first placement at the FE college and extended beyond it, with the final stages completed following my return from maternity leave in 2023. Conducting research within the college environment proved challenging, as identifying suitable research opportunities was not as straightforward as I initially anticipated. At that time, I was involved in one-on-one psychological interventions with college staff, many of whom shared their struggles with adjusting to post-lockdown changes (Excerpt 4.). Some staff members expressed anxiety about returning to in-person teaching after extended remote work, while others found it challenging to adapt to remote work. These insights inspired the focus of my qualitative research, which aimed to understand the nuances of these transitions and varied responses among staff members.

However, this project came with significant challenges. The extended gap between initiating the study, collecting and transcribing interviews, and eventually conducting the analysis made it difficult to maintain momentum. The break in continuity was largely due to my maternity leave. Almost a year without engaging with the project made it challenging to regain momentum. Looking back, although the timing of my maternity leave was outside my

control, I realise that if I had anticipated this gap, I might have attempted to complete more of the research, particularly the data analysis, prior to my leave. This would have allowed me to avoid the disruptive impact of such a lengthy hiatus and ensured that I could dedicate the necessary focus to the analysis and write-up stages (Excerpt 14.).

The final research component of my Doctorate was a quantitative project, which was in a field unrelated to my placement but important to me: food allergy research. This area has long been a personal interest, particularly since completing my master's degree, where I first became interested in the complexities and challenges surrounding allergies and public health. Compared to my previous projects, this quantitative project felt more straightforward, partly due to my familiarity with the topic and because I was determined to complete it efficiently. By this stage in the Doctorate, I had learned valuable lessons in time management and project planning, which helped me approach this research with a clear focus (Excerpt 14.). While the results did not achieve statistical significance, I was proud of the rigor of the study. The process reminded me of my passion for allergy research and reaffirmed my desire to contribute to this field once qualifying.

I have continued to build on my research knowledge following completion of these pieces of work. I have since been involved in a large-scale project facilitating access to health data for research purposes. The knowledge gleaned from completing this competency has enabled me to talk confidently about health research and understand complex research processes (Excerpt 18).

Psychological Interventions

Psychological Interventions was, in some ways, one of the most difficult and challenging competences for me personally while undertaking the Professional Doctorate. I had very little experience of conducting psychological interventions, much less so in a non-healthcare environment with teaching staff and students. I was supervised by the deputy principal of the college who then became the principal during my placement. She was very knowledgeable about the college, its staff and students and interested in the role Health Psychology could play, but in terms of psychological intervention this was not her area of expertise. This potentially impacted my confidence in this competence however luckily I had excellent support and group supervision from my university tutors and course peer group.

The approach I set out with to establish my professional practice, included promoting myself as a Trainee Health Psychologist and actively looking for clients when I started at the college. Initially I had limited success with students, this was partially due to not having an established presence in the college and conflicting information about the role of a Health

Psychologist across the student body. I reflected on this misunderstanding and was supported to hold several sessions to establish the role of a Health Psychologist in group tutorial sessions. This helped to establish me as an individual and my role within the college. There was a turning point for me as lockdown began, I found that a lot of staff members reached out to me for individual psychological intervention sessions, hoping to manage health behaviours during the difficult period of constantly being at home (Excerpt 11). From these sessions I found a good opportunity to complete my individual psychological intervention competence with a client experiencing chronic fatigue. I reflected that my confidence in this area did improve throughout the course of completing the Doctorate and having regular supervision with university staff, my peers and workplace contact. I was particularly proud of the work I completed during my group intervention as I felt I really engaged the group and that they benefitted from the intervention sessions (Excerpt 15).

Following completion of the competency I continued to provide psychological intervention to staff and students throughout the college and these skills have been valuable since returning to work full time for the NHS. I often assist innovators and colleagues in a health psychology capacity to address health behaviours. I would like to further improve my confidence in this area by undertaking a course in Cognitive Behavioural Therapy (CBT) or Acceptance and Commitment Therapy (ACT).

Teaching in health psychology

My teaching competence was one of the first I took on when starting the Doctorate, I was well placed within a FE college to conduct several teaching sessions and was undertaking this as part of my role. I conducted several teaching sessions at the college, one at X University to Healthcare Scientist undergraduates, one at the University of Staffordshire to Psychology undergraduate students and one online to my course group. My teaching skill set was certainly enhanced whilst working with educational staff at the FE college.

I chose the theme of technology enhanced care as an underlying theme to my teaching sessions. This was a theme that I had taken from my previous work within digital innovation but aligned well with the work I was undertaking at the college around the implementation of a wellbeing app for students. Reflecting and mirroring previous teaching I have undertaken and found beneficial, I tried to make my teaching sessions as engaging and interactive as possible. I was using outcomes-based learning (Fry et al., 2003, D'Andrea 1999) pedagogic theory to see the end goal of my teaching sessions. Since completing this competency, I have conducted many teaching and training sessions in my work in Innovation within the NHS including sessions about the role of Health Psychologists for colleagues. I have

become more confident while delivering teaching and have endeavoured to make my teaching sessions and materials as engaging and interactive as possible to support the learning outcomes (Excerpt 16).

Consultancy skills

For the consultancy skills competency, I attempted to draw up a signed contract early on in my training. I identified an opportunity through an old work contact who was designing a mobile phone application for clinicians to streamline the process of auditing a surgical procedure. Initially, I worked efficiently to get the contract drafted following a lecture from a former student at one of our university sessions which helped build my confidence in outlining the work package and providing terms and conditions for the work. Having listened closely to the lecture about negotiating a contract this learning helped immensely when setting boundaries and expectations when negotiating my own contract (Excerpt 9). Interestingly, of all the competences consultancy skills are probably what I used most frequently in my second placement working as a trainee Health Psychologist in health innovation. During this placement, I was required to meet with several health-based companies and NHS providers on a regular basis and consult with them about innovating in the NHS. I often negotiated or assisted negotiations between parties, contributed to value propositions and outlined work plans for organisations. I have completed a Project Management qualification PRINCE II Foundation and Practitioner course and these skills, combined with the skills I have gained from the consultancy competency, have helped me to develop in this area.

Professional Skills

In addition to fulfilling the competences outlined above, I have also developed several professional skills essential for working as an effective Health Psychologist. These include advanced communication, a strong understanding of legal and ethical practice, and reflective practice to ensure continual growth and improvement. I have also honed skills in systemic collaboration, actively involving service users in decision-making, and maintaining a commitment to continuing professional development. Finally, I have gained experience in teamwork, leadership, and offering informed advice and guidance to colleagues and other professionals.

Communication skills

Communication skills have played a crucial role throughout my time training as a Health Psychologist. I have deployed both written and verbal communication while interacting with clients, colleagues, teaching staff, students and businesses. When reflecting on my

communication skills, I recognise both my strengths and areas in which I could improve. My communication skills were tested when I first started at the college where I had to work hard to communicate my role and purpose within the college through clear, consistent and open communication with staff and students (Excerpt 1). This was delivered through both formal and informal routes, and I had many one-to-one conversations to bring clarity to my role while also delivering formal teaching and training. It was important that my messaging around the role I was performing at the college was clearly articulated as to avoid any confusion and prevent inconsistency in the ask of me from the college. Throughout my time on placement, I started to value having regular check-ins with key members of staff, including my placement supervisor. This ensured that I kept on track and could communicate clearly any challenges or issues arising in addition to checking that I was on the right lines with my thinking.

My presentation skills were honed whilst on placement, particularly as part of the teaching competency. Delivering presentations is something that I have had to do a lot of during my career. The teaching competency and working at the college helped me reflect that presenting to large groups has never been a strong point of mine and, I tried over the course of working at the college to improve my confidence in this area with some success. For example, I was asked to present to both staff and students at the college on various topics including wellbeing and sleep, vaping and health psychology in general. I received lots of positive feedback which helped to boost my confidence and presentation skills (Excerpt 13).

A further area where I had to be aware of my communication style was when liaising with clients and undertaking psychological intervention with both students and academic staff. Specifically, I was working with clients of all different literacy levels and therefore I had to ensure that any materials I used were suitable to accommodate diverse needs. I also had to adapt my verbal communication when speaking to staff in comparison to speaking to students. On reflection, I found that a skill for effective communication in these circumstances is effective listening, asking questions and tailoring my approach to suit the individual or group seemed to work effectively in line with Schon's reflecting in action theory (Schön, 2017).

Juxtaposed to this, my second placement was within a corporate environment and therefore I had to adapt to and adopt a much more professional and formal approach. As part of both placements, composing emails to effectively convey messages and lay out requirements is a skill that I improved upon through reflection.

Legal and Ethical Practice

Ethical principles act as a guide when making decisions and differentiating between right and wrong. They are particularly crucial to the working life of a psychologist (Kitchener & Anderson, 2011). Maintaining ethical and professional standards is important for psychologists tackling unfamiliar and challenging situations (British Psychological Society, 2021). Additionally, the college provided me with safeguarding training which was important when working with the student population. I found this training useful and that it gave me confidence in my role. A big challenge I faced on placement was from staff referring vulnerable students with severe mental health problems to me. I was asked at one stage if I could manage a list of students thought to be suicidal across the college. I had to ensure I set boundaries, communicating that this was outside of my training (Excerpt 6). It was difficult to maintain boundaries and simultaneously appear willing to assist staff and students dealing with at-risk individuals, especially amidst the Covid-19 pandemic and lockdowns. I feel I dealt with these difficult and unforeseen 'asks' effectively and held meetings with my workplace contact and the student support team to relay this to the wider staff body. It was, however, still challenging to relay this to students, and I frequently liaised with the student counsellor if I had concerns.

There were two students, in particular, that caused me concern which I reflected on a lot. The first was a student with an undiagnosed health condition leading to frequent fainting in college, risking injury. The student's welfare was managed by several staff members who disagreed about the health condition's cause. The situation was difficult for me as I was conducting psychological intervention with the student relating to sleep and health motivation. However, I was asked to weigh in on the cause of the fainting episodes and had to make clear that this was not something I could do and that she needed to seek medical advice. The situation was further complicated by differing opinions among staff. I raised it with my workplace contact, consulted professional guidelines and my psychological intervention teaching group, and they gave me helpful thoughts on how to manage the situation delicately (Excerpt 5).

The second student was diagnosed with Autism and struggled to attend lessons. I was holding one-to-one sessions related to her healthy eating behaviours. In our sessions, she often talked about trouble at college, including disagreements with students and her tutor. The head of student services asked me to sit in a mediation session with her and her tutor to support the student, as she felt the student trusted me. This was a difficult situation and one I reflected on a lot. In hindsight, it was not the right place for me to be. I should have met

with the student separately to remove myself from the conflict. It was good to support her, but I felt I was advocating for her, which was not my role at the time.

Supervision is a valuable tool used by psychologists and other clinical professionals (Snowdon et al., 2016, 2020). I had a good support network around me while completing my Doctorate and used supervision effectively to support my learning. My personal tutor was always on hand to offer guidance and talk through challenges. Having a good relationship with my tutor and keeping in contact helped me manage my workload and not get overwhelmed during the difficult period of working exclusively from home. My workplace contact became less available as my placement continued, moving into a more senior role. However, she found time to meet occasionally to discuss my work and point me toward opportunities to complete my competences. Supervision helped me ensure I was practising ethically and in line with HCPC guidance. Working now, outside a clinical environment, I still use supervision to discuss challenges in my day-to-day work with chartered professionals who provide an alternative perspective and guide my thought processes.

While completing the Advanced Research Skills competency, I kept ethical principles in mind. Having undertaken Good Clinical Practice (GCP) training, I had good awareness of conducting research with ethics in mind. GCP is described as ‘a set of internationally recognised ethical and scientific quality requirements for designing, conducting, recording and reporting research that involves human participation’ (GCP, NIHR). I ensured I correctly followed ethical procedures, gained ethics approval from the University, and ensured participants were informed and debriefed. If doing further research as a practising psychologist, I would always update my GCP training.

Organisational and systemic working

Working in a large organisation as a solo Health Psychology trainee was initially very daunting. While I enjoyed my time at the college, it was a unique experience, different from anything I had experienced previously in the NHS and healthcare settings where you have other clinicians working alongside you. There was a student support team at the college who fulfilled varying roles including Careers coaching, University Application support, Counselling, and Extracurricular activities. I was placed informally with the Student Support team mostly situated in the entrance hall of the college along a reception and back-office setup. This posed an issue as there was no consistent space for me to work or meet clients in private. In terms of confidentiality, this was a concern, and I often felt in the way of the core team or attempted to find a quiet space to work. This was not an ideal environment,

and I referenced this in my reflexive journal during the first few months of working at the college (Excerpt 6).

I discussed the issue with my workplace contact, who suggested using the space in the senior leadership office. This was a helpful suggestion when I needed to work but was not conducive to meeting clients, and it was extremely difficult to book a room. As a result, I often used unused classrooms to meet students for psychological interventions, which was hardly ideal. In some ways, the Covid-19 lockdown fortuitously helped overcome this issue, as all interventions moved to an online setting just four months into my placement.
When reflecting on organisation and systemic working, it's clear the Pandemic significantly affected my placement. I started at the college in November 2019, and in March 2020, the government announced the National lockdown due to the spread of Covid-19. The college was immediately shut down, and all teaching and support services moved online. I was still new to the college but had had substantial in-person contact with staff before lockdown. This familiarity helped when forming relationships online. Around this time, I started offering one-to-one interventions to staff members struggling through the transition into lockdown, changing tact significantly from working mostly with students to working mostly with staff. One reason for this was the difficulty engaging students in Teams chats; they were less inclined to partake in additional online conversations at home. Staff, however, welcomed support during this turbulent time. Many approached me about improving motivation, diet, and drinking habits during lockdown. Using technology during this time was also a point of development for me and many staff worldwide. We switched to Microsoft Teams, and I quickly got up to speed with its functionality (Excerpt 4).

During the pandemic, I was tasked by my workplace contact to lead the rollout of a wellbeing app called XXXX (NCFE Website 2024). The app was intended to support students in the college with different areas of wellbeing. I contributed to health behaviour videos on the app as well as its promotion. While this work aligned with my role as a trainee psychologist, I found it occasionally difficult to separate the work I was completing from the app, as staff and students fed back mixed opinions, mainly due to accessibility issues. Reflecting on implementing the app, I gained valuable management and consultancy skills but became the face of the app around the college. This was not my intention, and I think I spent too much time supporting the rollout instead of influencing content (Excerpt 7).

Some systemic issues during my placement required delicate handling. Many staff at the college lived and worked locally and had personal relationships outside work. They also had friendships with students living in the local town. Sometimes, navigating these relationships

was difficult, as disagreements between staff resulted in a lack of communication. I think I navigated this challenge well by staying out of personal relationships with staff and becoming a neutral party within the college (Excerpt 8).

Service user involvement

Service user involvement is incredibly important to the work of Psychologists (Greenfield et al., 1985). At the FE college I initially engaged with the student population by attending their Group tutorials. This helped me to engage with the students and gather their thoughts on what they would like to understand about the role of health psychology and how it can help them.

In my second placement I worked on a project that looked at how to improve access to Data for researchers. This can be a point of contention for patients and the public regarding staying in control of the uses of their data. As part of this role, I became a member of the public and patient involvement group which had the aim of consulting with patients and the public about the appropriate uses of their health data. I continue to work in this role currently and am a member of the PPI communication steering group which decides how best to deliver messages and consult with patients and the public about the use of their health data.

Team working and leadership

While I have had to work independently throughout my time on placement, I have also had to demonstrate working as part of a dynamic team in both of my placements. Additionally, I have had to demonstrate leadership. Working alongside colleagues at the college has been insightful and working with a diverse range of professionals has helped me to hone my skills as a Psychologist. The college positioning me with student services enabled me to work with student councillors, group intervention tutors, extracurricular activity leads and student support services. Working with student support services enabled me to work closely with this team to discuss individual students that were being supported by student services.
While working at the FE college I was also well placed to discuss wellbeing strategy with the senior leadership team within the college. I was asked to lead on the roll out of a wellbeing app across the college and then the college group. This was a significant undertaking and required me to work closely with different levels of leadership within the college in addition to consulting with staff and students. I led a series of steering group meetings related to the roll out of the app and guided other colleges looking to implement through this process. This opportunity enabled me to hone my skills in leadership in addition to working closely with a team (Excerpt 7).

In my second placement working in Innovation, I worked as part of a large team and had to report my independent work into a process driven pipeline. This experience gave me good insight into managing my own workload and asking for support and advice when necessary.

Giving health psychology advice and guidance

At the start of my Doctorate journey, I lacked confidence when providing health psychology advice and guidance to colleagues and clients. As I started to meet with more clients at the college my confidence started to grow but it was always an area where I felt I needed further training.

I was able to provide teaching sessions at the college relating to areas of concern such as making health choices around food consumption, vaping and energy drink consumption and received feedback that these were extremely helpful from both students and staff at the college. During my individual psychological intervention, I was working with a client with a diagnosis of chronic fatigue syndrome (CFS) and made sure to upskill myself around pacing and behavioural treatments for my client to manage the problematic symptoms of her CFS (Excerpt 12). I also became more confident when providing Health Psychology advice and guidance that would inform strategy and assist the implementation of innovation within my varying roles within the college or NHS settings (Excerpt 17).

Continuing professional development

Continual Professional Development (CPD) is crucial for psychologists to uphold and enhance their professionalism and expertise (BPS, 2017). The British Psychological Society (BPS, 2017) advocates for Psychologists to participate in many diverse forms of CPD and apply the knowledge into their professional practice.

Throughout my time at the college, I signed up for a number of courses, including safeguarding training and staying safe online training delivered by West Midlands Police service. In my NHS role in my second placement, I have undertaken all my statutory and mandatory training including safeguarding, PREVENT and Information Governance. All of which have been relevant to the work I have undertaken while completing my Doctorate.
I have also undertaken training courses such as Good Clinical Practice. I have, in this role, completed a course in PRINCE II project management and Agile project management training which has helped me manage complex and overlapping workloads.

Whilst on placement, I have attended conferences and events including University of Staffordshire Health Psychology Conference, Health Data Research UK, several innovation

conferences and Learning from Excellence. As part of the Doctorate, I also organised and hosted the annual Staffordshire Health Psychology conference in 2021, amidst the chaos of the Pandemic. This was a learning curve for me, as although I had been involved in conference management before I had never had as much input and responsibility while organising and hosting an event. The unforeseen change of the pandemic resulted in the conference having to be held online, which meant that we had to quickly change direction and think on our feet to make it successful while hosting online, I think myself and my course group did an excellent job at hosting an engaging event, despite initial challenges (Excerpt 10).

I have, throughout my time on the Doctorate, been mindful that my psychological intervention skills might have been impeded by not working in a clinical environment for some time. A situation that was exacerbated by the fact that my placement was not supervised by a chartered Psychologist. Because of this I have, at times, lacked confidence when it comes to delivering psychological intervention. I did learn a lot while completing the psychological intervention competency and one of the ways in which I overcame this barrier, was through one of my course peers, who was a certified CBT therapist and taught me a lot about the process of conducting psychological intervention. Yet, I recognise the need to upskill in this area further still and intend to undertake a course in CBT or ACT. I am always keen to learn and am committed to continuing to learn and grow following completion of this Doctorate by involving myself in regular CPD.

Conclusion

Undertaking my Professional Doctorate in Health Psychology has been an incredibly challenging and rewarding journey. The competences I have undertaken have developed my skills as a trainee Health Psychologist and I have been able to use these competences throughout my doctorate, as well as other areas of my professional life. The impact of the Covid 19 pandemic and my maternity leave have significantly altered my progress and getting to this final stage has been a challenge of my motivation and determination, one I am very proud of. Over the past five years I have developed skills and learnt new practices. Most of all I have developed an understanding and appreciation of the importance of reflective practice while training as a Health Psychologist and this is something I intend to continue to bring with me into my future work.

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Chapter 2. Advanced Research Methods

2.1 Systematic Review: Are digital behavioural interventions effective at improving sleep in Adolescents and Young Adults?

Review question: Are digitally delivered interventions effective at improving sleep in adolescents and young adults?

Abstract

Objective: Good quality sleep is vitally important for adolescents and young adults, however evidence suggests that many young people are not getting enough sleep. Little is known about whether digital interventions are effective at improving sleep in adolescents and young adults. The aim of this systematic review was to examine the effectiveness of digitally delivered behavioural interventions for improving sleep in a population of adolescents and young adults.

Methods: Following PRISMA guidelines a search strategy was produced and a systematic search of CINAHL Plus, MEDLINE, Cochrane Library, OVID, PsycINFO, PsycARTICLES, Web of Science and Google Scholar was conducted (PROSPERO registration number CRD42020204099). Studies were then screened by title, abstract and then remaining included studies were obtained and screened. Data was then extracted from the final included studies and each included study was assessed for quality.

Results: Nine studies met eligibility criteria, three of these were derived from the same study bringing the total number of interventions to seven. A range of behavioural digital interventions were evaluated in the eligible studies, including internet-based mindfulness sessions, online CBT, wearables combined with reward incentives, Internet based learning modules, positive reinforcement in internet chat forums, and an internet based behavioural intervention based on motivational interviewing. Behavioural change techniques included monitoring, incentive and threat, vicarious reinforcement, and psychoeducation. Only one study had a significant impact on sleep and contained a multitude of behavioural change

techniques. There were limited high-quality studies that used homogeneous outcome measures for sleep.

Conclusion: This review highlighted an overall lack of behavioural interventions, delivered digitally which have been evaluated in a population of young people and adolescents. Recommendations arising from findings of the current review include future clarity around age ranges for included populations, and a move toward a standardised outcome measure for objectively measuring sleep across sleep intervention studies.

Background and Rationale

Healthy sleep is vital for many aspects of adolescent and young adult health and wellbeing. Sleep has been shown to influence mood, emotional regulation (Haack & Mullington, 2005) social interactions (Krizan, & Hisler., 2020) and cognitive and academic performance (Lowe, Safati, & Hall, 2017; Rasch & Born, 2013). Quality and duration of sleep has also been found to have a profound effect on the mental health of young people and adolescents; sleep deprivation can impede a person's ability to cope with emotional challenges and has been shown to make people more sensitive to emotional events (Vandekerckhove & Cluydts, 2010). Insomnia can be defined as having problems either falling asleep or staying asleep, in addition to not feeling rested after waking (Hertenstein et al., 2019). In adolescents insomnia has been shown to have negative consequences for both mental and physical health outcomes in addition to serious consequences for social and cognitive functioning (Ma et al., 2018). Studies have demonstrated that insufficient sleep can lead to a deterioration in cognitive functioning including a decline in cognitive speed, working memory, reaction time and attention (Rasch & Born, 2013). Studies have made links between a lack of sleep and an increase in the risk of developing the common cold (Prather, Janicki-Deverts, Hall, & Cohen, 2015), being involved in a car accident (Bryant & Gómez, 2015), and substance abuse (Roane & Taylor, 2008). In addition, a lack of sleep has been shown to negatively impact dietary and physical activity habits (Nedeltcheva, Kessler, Imperial, & Penev, 2009).

There is debate regarding the amount of sleep required by different age groups (Scullin, 2017), however, guidelines suggest that adolescents and young adults should have between 7 and 10 hours sleep every night (McKnight-Eily et al., 2011). There is evidence to suggest that the majority of College students are not getting enough sleep, leading to a number of undesirable outcomes (Maas et al., 2011, Gradisar et al 2011) with research suggesting that this is a growing public health concern (Hysing et al., 2015, Owens et al., 2014) The causes for this sleep deficit have been examined and a myriad of reasons have been attributed, including adolescent socialising, stress, work and use of stimulants (Quante et al., 2019). Research has shown that adolescents find it difficult to change their health behaviours (Gayes & Steele 2014) including sleep behaviour (Cassoff et al., 2013; Moseley & Gradisar, 2009; Cain, Gradisar, & Moseley, 2011) which poses a challenge for those trying to intervene to improve sleep.

Electronic/digital devices, especially portable ones such as mobile phones, have also been attributed to the rise of disturbances of a healthy sleep routine in adolescents (Quante et al., 2019). Studies of young people and adolescents have associated bedtime use of electronic devices with an increased risk of short sleep duration, increased sleep onset latency and an increased sleep deficit (Hysing et al., 2015). Restricting mobile phone use before bed was shown by one study to increase length of sleep time (average of 21 minutes) and encouraged adolescents to turn their lights off earlier (average of 17 minutes earlier). Despite these positive findings the authors state that recruitment was low and indicate that this is due to many adolescents lacking motivation to change their behaviour in relation to mobile phone use (Bartel et al 2019).

Conversely, electronic devices and mobile phone applications (Apps) have, in the last decade become common place and have begun to be recommended to patients by health care professionals, including mental health practitioners, to treat, manage and monitor varied health conditions (Better Health, NHS, 2022). These apps have been used to: help patients manage symptoms; adhere to treatments; contact their healthcare provider; attempt to influence patient's health behaviour; monitor nutrition and exercise regimes; and provide verified information about their specific condition (NHS App Library, 2021). These apps are only accessible via the use of an

electronic device, either a mobile phone or a computer. Apps have been developed that are designed to assist with sleep problems, either through monitoring, providing information or demonstrating social norms. Given the popularity of mobile phone use amongst the general population, researchers have attempted to evaluate the efficacy of digitally delivered interventions aimed at improving sleep in a variety of different populations, including elderly females, first time mothers and airline pilots (Shin et al., 2017). Systematic reviews have been conducted which investigate associations between sleep and digital device use in adolescents and young adults, but this has primarily focused on the theory that screen time has negatively impacted sleep (Hale, 2015; Mac Carthaigh et al., 2020). There has to date been limited research examining the benefits of screen time in relation to delivering interventions that positively impact sleep in this population.

This review sought to examine the efficacy of behavioural interventions that were delivered digitally (via a mobile/device or computer) on the sleep behaviour of the adolescent and young adult population.

Methods

Following PROSPERO protocol registration, ethical approval was obtained via Staffordshire University. This systematic review was conducted according to the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) checklist (Moher et al., 2009).

Search methods

The following databases were used to search for studies: CINAHL Plus; MEDLINE; Cochrane Library; OVID; PsycINFO; PsycARTICLES; and Web of Science. Google Scholar was also searched for grey literature. I additionally hand searched included reference lists within relevant journals. The search was divided into four areas of focus; words relating to teenagers or adolescents, words related to digital devices, words related to sleep and words related to treatment or intervention. The search was restricted to words that could be found only in the title or abstract of the papers.

Words with alternative endings were searched using truncations and words that were intended as complete phrases were searched using quotation marks.

Inclusion and exclusion criteria

To be included in the review, studies had to include a behavioural intervention delivered via or including a digital element, aiming to improve sleep outcomes in an adolescent/young adult population between the ages of 13-25 years old. Interventions were not limited in scope, for example by length of treatment or number of sessions but did have to involve a digital element i.e., use of an app, virtual reality, wearables, or a digital monitoring device. To determine what would be defined as a digital intervention the current review was informed by the 'Mode of Delivery of Behaviour Change Interventions Taxonomy' (Carey et al., 2016), a checklist which outlines digital modes of delivering behaviour change interventions.

The intervention had to include a behavioural change technique as informed by the Behaviour Change Taxonomy (BCT) (Abraham & Michie, 2008) used to improve sleep outcomes for participants. This included self-recording or monitoring of behaviour or therapy delivered via a digital platform. To be included, interventions had to attempt to influence sleep quality or sleep duration and be delivered via a digital medium, for example Cognitive Behavioural Therapy (CBT) or other therapeutic techniques delivered via an online therapist, wearables, or a mobile app. Interventions were excluded if no part of the intervention involved an element of digital technology and if the intervention was not behavioural in nature, for example, interventions were excluded if they were purely medical (i.e. only using medication to impact sleep) did not involve a behaviour change element. There was no requirement for a control group to be included and no restriction on control group activity for included studies. Searches were restricted to articles published in the English language, and to those which reported on the outcomes for adolescents and young adults up to the age of 25. Studies conducted prior to the year 2000 were not included due to the rapid advancement of technological devices in the last 20 years. All articles were required to be peer reviewed and original research, not discussions, reviews, or letters. Full inclusion and exclusion criteria are outlined in Table 1.

This review included sleep outcomes that were measured both subjectively and objectively. Sleep was measured by duration objectively, but self-reported sleep measures were also included. Self-report measures included scores on scales such as the Insomnia Severity Index (ISI), Pittsburgh Sleep Quality Index (PSQI) and others as relevant. Sleep diaries and one item scales were also included. Self-reported sleep quality, sleep duration and other parameters were included as relevant. Outcomes were included if sleep could be improved due to increased knowledge of sleep hygiene practices.

Experimental or intervention studies including randomised controlled trials (RCTs), longitudinal, case-control and cross-sectional studies were eligible for inclusion. This review did not include qualitative studies although studies using a mixed methods approach were considered if they met the outlined inclusion criteria. Review papers and protocols were excluded.

Selection of studies

Following the removal of duplicates, the initial review involved screening study titles and abstracts by a first reviewer. Any studies that did not meet the inclusion criteria were excluded at this stage. Full copies of remaining studies were obtained where possible and were screened by the reviewer and excluded if they did not meet the review criteria. Full paper versions of all included studies at this stage were sought, if these were not readily available they were requested from the British library and authors were contacted, where they were not obtained they were excluded from the review. A second reviewer then independently screened 5-10% of remaining papers and discrepancies were resolved via discussion between the two reviewers. If full versions of papers were unavailable or key information was missing, authors were contacted by the first reviewer.

Critical appraisal of included studies

This systematic review used the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018) to assess study quality. This tool was deemed appropriate as it permitted the reviewer to appraise the methodological quality of five categories of studies:

quantitative descriptive studies; qualitative research; randomised controlled trials; non-randomised studies; and mixed methods studies. The first reviewer appraised all included studies and the second reviewer used the tool to appraise 5-10% of included studies. This assessment of bias across included papers influenced the interpretation of results as some studies were assessed as higher quality than others. This tool does not produce an overall score for each study and instead suggests using comparison between studies to critically appraise quality.

Data collection process and data items

Data were extracted from the included studies, including authors name; publication date; study methodology in addition to PICO tool components; Participants, Intervention, Control group, and Outcome (Table 2. Included Study Characteristics).

Strategy for Data synthesis and analysis

A narrative synthesis of findings from the included studies was conducted, this focused on type and content of intervention, population characteristics and relevant outcomes. Intervention effect for each study was calculated by risk ratios or standardised mean differences for dichotomous (risk ratios) or continuous (Standardised Mean) outcomes. Meta-analysis was planned, however was not a feasible option once data had been extracted from the included studies. This was due to the heterogeneity of outcome measures and the small number of included studies. Subgroup analysis was not planned, however, if included trials conducted the same types of intervention and had similar outcome measures then a random-effects meta-analysis would have been considered. In place of a Meta-analysis a narrative synthesis was conducted.

For synthesis methods see https://www.goodreports.org/reporting-checklists/prisma/

Results

Study selection

The database searches originally yielded 1760 studies. Duplicates were removed and 1586 studies were screened on title and abstract. Ninety-three full text studies were reviewed for eligibility and of these eighty-three were excluded for the following reasons: Intervention not behavioural (n=10); the Intervention was not delivered digitally (n=28); no sleep outcome measure was included (n=7); the study was not an intervention (n=4); the population was not between 13-25yo (n=29); and 'other' including non-English language studies and protocols (n=6). This process is illustrated by the PRISMA flow diagram (Figure 1).

Study characteristics

Study characteristics are presented in Table 2. The nine included studies were published between 2013 and 2020 and were conducted in the United States (n=5), the Netherlands (n=3) and Sweden (n=1). Three of the nine papers were linked to the same study (de Bruin et al., 2015; de Bruin et al., 2017; de Bruin et al., 2018) and therefore data from these papers were extracted as a single study including all involved participants.

Population samples included young people and adolescents between the ages of 13-25, however, in some of the studies age brackets were unclear. In the main, participants were recruited from Colleges and Universities. Participants had no current underlying health conditions, however in one study participants reported heavy drinking behaviours (Fucito et al, 2017). Sample sizes ranged from 22 to 1767. Studies primarily used RCT designs (n=7) and others nonrandomised designs (n=2).

Duration of Interventions

Interventions ranged in terms of duration with the longest intervention lasting 8 weeks (Antonson et al, 2018) and the shortest comprising of just one session lasting 45 minutes (Short & Schmidt 2020). Intensity of sessions was likely correlated with high attrition rates as many studies reported that they were challenged to keep participants engaged in sessions as time went on and several studies reported high attrition rates.

Control and Comparisons

All included studies included a control or comparison group, many of these were active controls (n=6) consisting of other types of intervention, sometimes delivered digitally, sometimes via a different method. Passive controls were also included (n=3) including waiting lists (n=2) and non-incentivised comparison groups (n=1).

Intervention Characteristics

The contents of the included interventions varied and were delivered via different digital media; six were delivered via websites, three via mobile phones and three made use of actigraphy wearable devices. A wide range of behavioural digital interventions were evaluated by the studies, including internet-based mindfulness sessions, online CBT, wearables combined with reward incentives, Internet based learning modules, positive reinforcement in internet chat forums, and an internet based behavioural intervention based on motivational interviewing.

The interventions were examined to understand which behaviour change techniques from the behaviour change taxonomy (Abraham & Michie, 2008) were incorporated in each. Most interventions (n=5) included the following BCTs: ‘1. Provide information about the behaviour health link’; ‘2. Provide information on consequences’; and ‘8. Providing instruction’ related to sleep hygiene and ways to achieve a good night sleep. Other behavioural change techniques employed were ’12. Prompt self-monitoring of behaviour’ (n=2), ‘14. Providing contingent reward’ (n=1) and ’19. Provide opportunities for social comparison’ (n=1) (Table 3).

Outcome measures

Heterogeneity amongst outcomes prevented a meta-analysis from being conducted. Disparate measures of sleep were used across the included studies. Most of these measured the duration of sleep subjectively via surveys such as the Pittsburgh Sleep Quality Index (PSQI) (k=2), the Insomnia severity index (ISI) (k=1), the Holland sleep disorder questionnaire (k=1), or the sleep related behaviours questionnaire (k=1). Several studies used objective measures such as actigraphy devices (k=3) which measured sleep duration and often formed part of the intervention as a monitoring tool. One study measured intention behaviours, via the Sleep intention and

behaviour questionnaire (k=1) and another measured knowledge related to sleep behaviours (k=1). These proxy outcomes made it difficult for these studies to be compared to other included studies which strengthened the justification for not conducting a meta-analysis.

Intervention effects

Only one of the included studies reported positive significant findings relating to the main sleep outcome measure; De Bruin et al., 2015 demonstrated that 6 weekly sessions of Guided internet therapy significantly improved adolescents sleep efficiency, sleep onset latency, wake after sleep onset, and total sleep time at post-test, and improvements were maintained at follow-up. However, this 3-armed intervention additionally showed the same effect for in person group therapy when compared to waiting list control. It is also important to note that the small sample sizes for several of the included studies would likely undermine confidence in findings.

Risk of bias in studies

The Mixed Methods Assessment Tool (MMAT) (Hong et al., 2018) was used to evaluate the quality of included studies. This MMAT tool discourages the user from calculating an overall score from the ratings in each criterion. It instead, suggests that reviewers provide a detailed presentation of the ratings of each criterion and to allow results to be compared across studies and areas assess (Table 4).

Mixed results were found in the quality assessment of studies, studies were split between randomized controlled trials (n=5) and non-randomized studies (n=2). The RCTs all met the criteria for appropriate randomisation and baseline measurements were comparable across all. None of the RCTs discussed blinding the outcome assessors to the intervention arm. Of the two non-randomised studies, researchers did not clearly discuss whether cofounders were accounted for in either study and only one reported complete outcome data. Overall, the studies were comparably of limited quality.

Discussion

This systematic review examined the effectiveness of digital behavioural interventions to improve sleep outcomes for adolescents and young adults. Studies incorporated a range of behavioural interventions delivered digitally. A narrative synthesis demonstrated few of these interventions resulted in a significant improvement in sleep outcomes. Those that did, included characteristics such as psychoeducation regarding sleep hygiene, restriction of time in bed, stimulus control, cognitive therapy, and relaxation techniques. Participants were also asked to keep a sleep log and reviewed this at each session.

The intervention that significantly impacted sleep (de Bruin et al, 2015) included a combination of BCTs including 8. Provide instruction and 12 Prompt self-monitoring behaviours. There was also some evidence to suggest that a study that included an incentive technique (BCT 14. provide contingent reward) impacted on participant sleep duration positively in comparison to a non-incentivised comparison group.

Included studies were of medium quality as indicated by scores on the MMAT tool. Studies varied in reporting standards, for example, data on participant characteristics were missing and outcome measures were disparate, making it difficult to truly compare and contrast the effectiveness of the included studies.

This review is novel as it examines behavioural interventions delivered digitally across a specific age group incorporating adolescents and young adults. Since this review began, research has been conducted examining digital sleep interventions, focusing on monitoring sleep duration via trackers and other digital mediums (Glazer Baron et al., 2022). Glazer Baron et al., 2022 conducted a systematic review which targeted an adult population and concluded that many digitally delivered sleep interventions were at an early or feasibility stage of development. There was suggestion that future work should focus on how to reduce barriers and engage populations to measure and monitor sleep using wearable and digital technology.

Recently, published preliminary findings of another systematic review focused on digitally delivered sleep interventions targeted at post-secondary school pupils (Papaconstantinou et al., 2022). This review examined interventions to improve both

sleep and mental health interventions. So far, in the Papaconstantinou et al review, only one database has been searched but in future could further support and expand on the current review's findings.

Limitations

There were several limitations to the current review which must be considered. Key limitations include an overall limited number of eligible studies in addition to the low quality of some included studies. Only papers published in full and in English were included which may create elements of publication bias. Due to the exclusion criteria, age of participants was a factor that may have limited the number of studies that were included. The aim was to include studies of adolescents and predominantly those at college and university. Therefore, the inclusion criteria excluded 12-year-olds which were included in several excluded study populations. The inclusion of both randomised and non-randomised/mixed methods studies presented a challenge for quality assessment comparisons. Other quality assessment criteria were considered but the MMAT was deemed the most appropriate for diverse study methodologies. This assessment criteria discourages users from applying a score to the individual study based on the ratings but encourages a comparison overall between included studies. This lack of score made it more difficult to quantify and understand which studies were high quality and which were not.

The heterogeneity of the interventions and outcomes also made comparison of interventions challenging and limited the analysis. As the number of digital sleep interventions continue to grow there is a need to develop robust measures that can more consistently and accurately measure sleep outcomes so that more accurate comparisons can be made across studies.

The included studies had relatively small sample sizes which could have limited the ability to undertake meta-analysis, and would have likely undermined confidence in findings.

Implications of the results for practice, policy, and future research.

Future research should continue to explore the potential of digitally delivered behavioural interventions for improving sleep in adolescents. Clear age ranges should be included, and a variety of age groups examined encapsulating the term ‘adolescents and young adults’.

In studies using the same outcome measure, larger sample sizes across studies would increase the likelihood of meta-analysis being conducted. High attrition rates were an issue for several studies in this review and therefore an examination of techniques to reduce attrition and encourage engagement in future interventions is vital to conducting trials that retain participants and produce measurable results. The use of standardised sleep duration outcome measures is a key recommendation for future studies examining sleep interventions and could include a mixture of self-reported and objective measures such as those measured via actigraphy devices.

Conclusions

The findings from the nine studies included in this review demonstrated that evidence for digitally delivered behavioural sleep interventions is lacking. There is some potential for well-designed studies, with homogeneous outcome measures, to impact on the sleep of adolescents and young adults. The review, however, was limited by a small number of trials in addition to small effect sizes within included studies. There is a need for further exploration of sleep interventions delivered via a digital medium to evidence the effectiveness of this delivery method in addition to appropriate, standardised and comparable sleep outcome measures specifically designed for sleep interventions.

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Tables and Figures

Table 1.

Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
1. Intervention study	1. Is not an intervention study
2. Includes Adolescents 13-25 yo	2. Participants are under 13yo or over 25yo
3. Intervention delivered via digital medium	3. Intervention not delivered via digital medium
4. Studies from the year 2000 onwards	4. Is dated before the year 2000
5. Include outcome measure related to sleep	5. Does not include a sleep outcome
6. English language study	7. Not English language study

Figure 1. PRISMA diagram

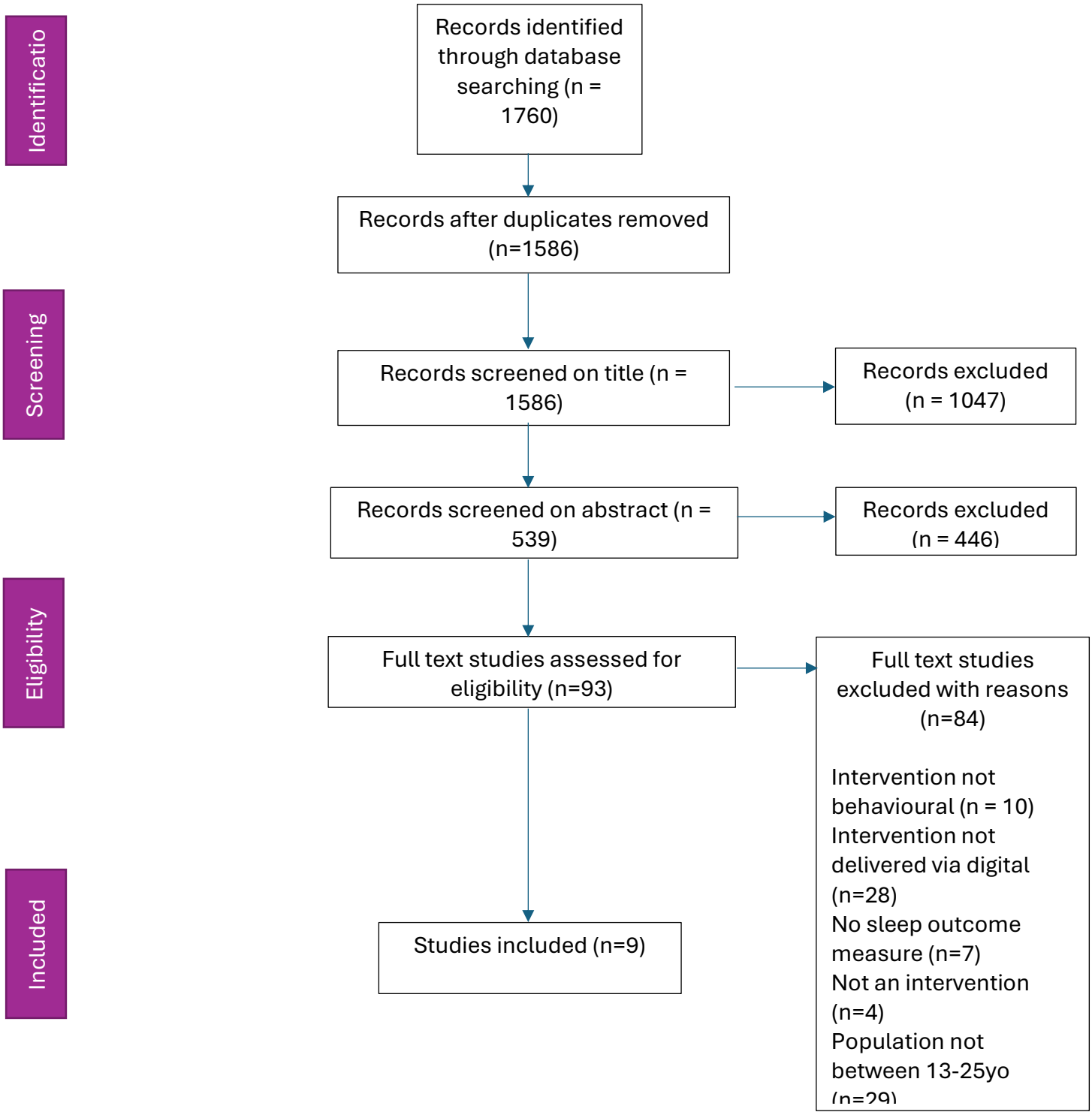

Table 2. *Included Study Characteristics*

First author, date, country	Design	Participants Description Age Gender	Intervention and comparator/control	Outcome measures (Sleep)	Findings
Antonson et al, 2018 Sweden	RCT, To investigate whether there is an effect of iMBI, delivered as an Internet-based self-help programme, on psychiatric and stress-related symptoms in adolescents.	202 young people from rural and urban schools. Gender: 70% female. Mean age: 16.9 y/median age 17 y/range 15–19 y.	(a) Mindfulness Base Intervention (iMBI)The iMBI, an 8-week course consisting of sessions of 10 min of mindfulness meditation twice daily, 6 days a week. The modules consist of standard mindfulness meditation techniques, such as body scan and mindfulness of breath, and other perceptions, and could be defined as an intervention based on mindfulness training. The intervention incorporates elements from both MBSR and more cognitively oriented parts from MBCT. (b) Music therapy intervention A total of ten non-vocal classical music pieces accessible on YouTube were chosen that met the criteria of (1) accessibility, i.e., being relatively easy to listen to for an untrained ear, (2) being of approximately 10 min in duration, and (3) recognisable as being calming or soothing. (c) Waiting list	Pittsburgh Sleep Quality Index (PSQI)	No significant difference in any of the scales was found between those who logged in and completed at least one session and those who did not log into the programmes.
de Bruin et al, 2015 The Netherlands de Bruin et al,	RCT	116 adolescents meeting DSM-IV criteria for insomnia (mean age = 15.6 y,	(a) Guided Internet therapy (IT) Cognitive behaviour therapy for adolescent insomnia (CBTI) of 6 weekly sessions, consisted of psychoeducation, sleep hygiene, restriction of time in bed, stimulus control, cognitive therapy, and relaxation techniques	Actigraphy and Sleep Logs The Holland Sleep	Adolescents in both IT and GT, compared to WL, improved significantly on sleep efficiency, sleep onset latency, wake after sleep onset, and total sleep time at

2018 The Netherlands de Bruin & Meijer , 2017 The Netherlands		SD = 1.6 y, 75% female)	(b) Group Therapy (GT) Cognitive behaviour therapy for adolescent insomnia (CBTI) of 6 weekly sessions, consisted of psychoeducation, sleep hygiene, restriction of time in bed, stimulus control, cognitive therapy, and relaxation techniques (c) Waiting list	Disorder Questionnaire (HSDQ) The Chronic Sleep Reduction Questionnaire (CSRQ)	post-test, and improvements were maintained at follow-up. Most of these improvements were found in both objective and subjective measures. Furthermore, insomnia complaints and symptoms of chronic sleep reduction also decreased significantly in both treatment conditions compared to WL
Fucito et al, 2017 USA	RCT	42 undergraduate students, age 20.71yo (intervention) 20.33yo (control), 47% female,	(a) 'Call it a Night' (CIAN) comprised of 4 modules, 4 weeks in length. At the beginning of each module, participants received a brief, personalized summary of their health information (e.g., qualitative sleep characteristics, alcohol use) using data obtained from the intake assessments. Participants received general sleep advice that included stimulus control (i.e., limit activities in bed, time awake in bed), the recommendation to maintain a consistent bed/ rise time and sleep duration of 8–9 hours based on recommendations for adolescents/young adults, information about common behaviors (e.g., alcohol) and environmental factors that disrupt sleep and how to address them, and tips for managing stress. (b) The 'Healthy Behaviours' (HB) control was also comprised of 4 modules delivered over 4 weeks. The CIAN condition had a larger total number of webpages than the HB condition. Another major difference was that good sleep hygiene advice, including advice to limit alcohol use for better sleep, was provided all at once in the first module of the HB	Subjective Ratings of Sleep Quality and Sleep-Related Impairment The Pittsburgh Sleep Quality Index (PSQI) Sleep-Related Impairment Short-Form The Pittsburgh Sleep Diary Participants wore Philips Respironics	There were no significant effects of condition or time on average sleep duration, bedtime, rise time, or sleep efficiency measured using actigraphy There was no effect of treatment condition on overall sleep quality However, both overall sleep quality and sleep-related impairment improved during treatment and these improvements were sustained through follow-up, regardless of condition.

			condition but broken up into different sections across all 4 modules of the CIAN condition to allow for more in-depth coverage.	Actiwatch 2 actigraphy devices, well-validated wrist-worn sleep trackers that measure sleep/wake activity	
King & Scullin, 2019 USA	Non-randomised control	22 design students (age and gender split unknown)	(a) If participants maintained an average sleep duration of ≥8.0 hours for five nights monitored by actigraphy devices, they would earn extra credit. By contrast, if they slept an average of 7.0–7.9 hours, there would be no grade change, and if they slept an average of ≤6.9 hours, they were instructed that they would lose points (b) A non-incentivized comparison group	Sleep duration measured by actigraphy devices	Participants who took the 8-hour challenge slept an average of 98 minutes more each night than non-incentivized students and 82 minutes more than they self-reported to sleeping during the semester.
Quan et al, 2013 USA	Non-randomised control	1767 college students taking psychology (age and gender split unknown)	(a) An Internet-based supplementary learning module containing sleep physiology and sleep hygiene information (b) Standard Instruction - Over approximately 7 days, spanning the fourth through fifth weeks of the course, all introductory psychology students received lectures on consciousness and sleep	Performance of students on sleep knowledge assessments on the Sleep test	Internet-based instructional module resulted in a longer lasting improvement in sleep-related knowledge than standard instruction in an introductory college psychology course.
Robbins & Niederdeppe, 2017 USA	RCT To examine how do conversational valence relate to intentions to sleep?	301 college students. Gender: 74% female Age range 17-23 years	(a)Participants first watched a short sleep video and were randomly assigned to either talk with a partner in an online chat conversation. Unknown to participants, the chat partner was a confederate coached to say positive things about sleep and the message ('positive' chat condition), negative things ('negative' chat condition), or unrelated things ('natural' chat condition).	Sleep intention and behaviour (Likert scale)	Post hoc tests revealed intentions were higher in positive than negative chat conditions but not more positive than the natural or no-chat control conditions Intentions were marginally lower in the negative talk

			(b) proceed to a short survey following the sleep video		condition than natural but no different than no-chat.
Short & Schmidt, 2020 USA	RCT	61 students were recruited from the undergraduate participant pool at a large south- eastern university Gender: 84% female Mean age: 19.43, SD = 2.04	(a)The FSET Anxiety and Sleep Treatment (FAST) is a brief, 45-minute computerized intervention accessed by any device connected to the internet. The majority of the information was delivered via text. The programme contained interactive features such as quizzes, which direct participants to content, personalized to the individual user (b) Physical Health Education Treatment (PHET). PHET is also a 45- minute computerized intervention, including audio and visual features as well as comprehension quizzes. PHET provided a brief review of the importance of sleep and basic sleep hygiene principles as well as stress management, making it a particularly stringent control condition.	Sleep-Related Behaviors Questionnaire (SRBQ) Insomnia Severity Index (ISI)	There were no significant direct effects on insomnia outcomes at either time point. There were significant effects on sleep-related safety aids (cognitive or behavioral strategies used to cope with distress that paradoxically exacerbate symptoms) at Month 1

Table 3.

Behaviour Change Techniques in included interventions

Behaviour change technique	**Number of studies incorporating technique in the intervention**
1. Provide information about behaviour health link	**5**
2. Provide information on consequences'	**4**
3. Provide information about others approval	**1**
8. Provide Instruction	**1**
11. Prompts review of behavioural goals	**2**
12. Prompt self-monitoring of behaviour	**2**
14. Provide contingent reward	**1**
19. Provide opportunities for social comparison	**2**

Table 4.
MMAT: Risk of Bias in Studies

	SCREENING QUESTIONS		2. RANDOMIZED CONTROLLED TRIALS					3. NON-RANDOMIZED STUDIES				
Citation	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	2.1. Is randomization appropriately performed?	2.2. Are the groups comparable at baseline?	2.3. Are there complete outcome data?	2.4. Are outcome assessors blinded to the intervention provided?	2.5 Did the participants adhere to the assigned interventi on?	3.1. Are the participants representative of the target population?	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	3.3. Are there complete outcome data?	3.4. Are the confounders accounted for in the design and analysis?	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?
Antonson et al, 2018	Yes	Yes	Yes	Yes	No	No	No					
de Bruin et al, 2015 de Bruin & Meijer, 2017 de Bruin et al, 2018	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes					
Fucito et al, 2017	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes					
King & Scullin, 2019	Yes	Yes						Yes	Yes	Can't tell	No	Yes
Quan et al, 2013	Yes	Yes						Yes	Yes	Yes	Can't tell	Yes
Robbins & Niederdeppe, 2017	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes					
Short & Schmidt,2020	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes					

2.2 Systematic Review Commentary

Introduction

Systematic reviews allow researchers to examine a broad range of evidence related to a specific research question, systematically providing a reliable overview of conclusions drawn from previously conducted studies. Due to the systematic nature of the review the key to a quality review is that findings can be replicated (Petticrew & Roberts, 2008). The following commentary will describe my experiences of designing, conducting, analysing, and writing up this systematic review.

Identifying a research topic and defining the review question

I had some prior experience of conducting and writing up systematic reviews, however I was still dubious about the process. I was aware that these reviews can be very detailed and time consuming, requiring intensive screening and precise record keeping. Initially I struggled to find a topic suitable for my review and had several ideas which I discussed with both my placement and university supervisor. I had planned to conduct a review on interventions to decrease the intake of caffeinated energy drinks in young people, as this was raised as an area of concern by my placement, a Further Education college. I began by completing a brief scoping literature search on this topic but found the number of intervention studies to be limited. Researchers had mainly focused on the health implications of consuming energy drinks but had not yet conducted interventions designed to reduce this behaviour. I wanted to conduct my review on a topic that had not been thoroughly explored but simultaneously realised I needed to be able to identify enough studies to conduct an effective systematic review. Systematically reviewing studies and defining the research question to include an appropriate number of studies for review is an aspect that I have struggled with in the past and I reflected that I didn't want to repeat past mistakes when approaching this review.

When considering a systematic review topic, I was working as a trainee Health Psychologist in a Further Education college and a number of the issues arising were related to sleeping problems or lack of sleep in adolescents. Anecdotally, many students at the college reported poor sleep hygiene in relation to the use of technology at bedtime and how this would impede their ability to sleep. I then examined the research and found that several studies and reviews had been conducted to help young people reduce technology use as a way to aid sleep, however many had reported high attrition rates and difficulty in compliance (Perrault et al., 2019). My research field of interest has previously included the application of digital healthcare within a Health Psychology context. This led me to a research question related to the efficacy of sleep interventions deliberately delivered digitally to adolescents and young adults and whether this was effective as a way to incorporate both use of technology and sleep interventions. I therefore aimed to conduct a systematic review to identify behavioural interventions delivered via a digital medium that would be effective at improving sleep in adolescents and young adults.

In line with good systematic review guidelines (Shamseer et al., 2015), I began by completing an initial scoping review to check for existing reviews related to this topic. In August 2020, I explored PROSPERO, a large database of systematic reviews protocols, and did not find any 'in progress' reviews which examined digitally delivered behavioural interventions aiming to improve sleep in an adolescent and young adult population.

Following this, I wrote an initial protocol for my review which helped me to structure my research questions and lay out the methodology of the review. If completing the review again, I would add further detail to my protocol and ensure I had a clear scope for the review before embarking on the searches, as this would have helped me more clearly follow my inclusion/exclusion criteria. Registering my review on PROSPERO was a straightforward process and provided a good template for my protocol. I spent some time looking at other reviews to get a sense of how much detail to include and what good looks like.

I completed the Staffordshire University ethics disclaimer prior to beginning my review which was required to comply with General Data Protection Regulation GDPR (2018) regulation and Staffordshire University's research ethical review policy (2019). It was a surprise to learn there were ethical considerations when conducting a systematic review but I took some learning from the process of conducting the ethics waiver form.

Defining search terms and conducting searches

I found constructing a search strategy challenging and I looked to tools which could help with this process. I used the PICOs (Population, Intervention, Comparison Outcome) tool to assist me in defining terms for my strategy. The challenge came predominantly from defining the population using the correct terms and choosing appropriate synonyms to ensure all relevant studies were identified.

With hindsight I have reflected that my search strategy may have been too broad and could have been further streamlined. I wanted to define a population that encompassed a 'teenager into young adult' as this was the population with whom I worked. As I was on placement at a further education college at the time of starting my systematic review, I included the phrase 'college students' alongside 'adolescents' 'teenagers' etc. The issue with including the phrase 'college' in my search strategy was that in the USA college is equivalent to University level and takes the included population beyond the age of 18 years old. Later, once my review was almost at an end and following a discussion with the module leader I reflected and realised that running the search strategy without the phrase 'college students' may have excluded many studies that were not relevant to my review and saved me time in the initial screening phases.

Prior to running my search strategy through my chosen databases, I referred to Bramer et al's (2017) guidance on using database combinations for systematic reviews. This knowledge helped guide me to use databases efficiently and not to disregard the likes of google scholar. I honed my skills in using truncation functions and Boolean operators whilst designing and running my search strategy.

Having been involved in systematic reviews in previous research roles I was already aware of the importance of excellent record keeping and storage when it came to organising references for the purpose of review. Despite my previous experience, downloading thousands of references and abstracts from databases was still a daunting task. I began by using Endnote as I have in the past but switched to using Refworks as I found this much easier to manage references and organise included studies.

Screening

Once I had organised all my references from the chosen databases into RefWorks, I removed duplicates and then transferred the remaining references into a master excel file which I then used to begin my title and abstract screening. I began with 1760 studies and began screening by title and abstract which took a considerable amount of time. This coincided with a second lockdown due to the COVID-19 pandemic and I was struggling with motivation and low mood due to a lack of access to colleagues, friends and family. Screening was not an easy task for me; I find it both cognitively demanding and tedious and it took me much longer than I initially anticipated, and the lockdown exacerbated this. Coping strategies I used to try and combat this lack of motivation was to set myself small manageable tasks, such as ‘today I will screen 100 abstracts’ and make sure I completed this, rather than trying to do too much all at once and becoming overwhelmed. Once I had excluded a significant number of studies on title or abstract, I attempted to obtain all full paper copies of remaining studies. This proved difficult and despite requesting several studies through the British Library and contacting authors, there were a few studies I was unable to obtain or could only obtain in a foreign language.

It is recommended that screening is reliably validated by a second reviewer (Kitchenham, 2004), and I asked one of my fellow students on the Health Psychology Doctorate if they would be happy to screen 10% of my included studies against my inclusion criteria. This was a useful exercise as we agreed on all included studies and there was no need for further discussion. This gave me an increased level of confidence in my ability to fully interpret studies, something I had not been so confident about up to this point.

One issue that I came across while screening was the inclusion criteria related to the age of the population. Partially due to the number of university-based studies that were included and partially because of the varying interpretations of the phrases ‘adolescent’ or ‘young adult’. It was very difficult to find studies that specifically included a population of 13-18 year olds and I had a very strong gut feeling I was excluding a number of good, otherwise included, studies and would be left with nothing. I discussed this issue at length with my supervisor and we agreed that the best course of action would be to amend my inclusion criteria on PROSPERO to reflect a new age bracket of 13-25 years old. I made the amendment on PROSPERO and reflected that I was really thankful I had kept detailed records of reasons for exclusion on my excel spreadsheet so that I could go back and check any papers that had fallen outside of the original age bracket.

Despite the change in my population inclusion criteria, I continued to struggle with the age range as many studies reported a mean or median age but not a range. This was frustrating and sometimes I got confused and felt I was changing my mind, as the longer the screening went on the more some papers would appeal from a suitability perspective but not meet the criteria. I realised that consistency was key and eventually I decided to include studies that reported a mean age that fell within the defined age bracket and went back and checked that I had included all studies that fell within this criterion. I reflected that I had worried about this age bracket conundrum for quite some time and in the future, I would set clear parameters and stick to them, perhaps influenced by more research into the area in question or a more precise search strategy at the offset.

Data extraction

In comparison to screening I found data extraction to be a more rewarding and enjoyable part of systematic reviewing. By this point, I had whittled the studies down to a remaining 10. For the data extraction I made use of both my protocol and the guidelines of my target on what to include. I ended up extracting more data than was required by the SAGE Digital health Journal. My data extraction did uncover some issues in the studies identified, including issues of reporting quality and I quickly

realised that three of the papers were all based around the same study and used the same participants. I had a discussion with the course supervisor who helped me to understand the requirement to include the three papers as one study.

Another problem I encountered while data extracting was that some of the outcome measures, while initially appearing to examine sleep duration, only actually examined proxy measures such as intention to sleep or knowledge of sleep. I continued to include these in the review but started to become aware of the heterogeneity between the outcome measures at this point and realised that this may impact on my ability to complete a meta-analysis.

Quality Assessment

Higgens et al., (2019) highlights the importance of quality assessment in a systematic review as a key part of the overall process. It is important to understand the quality of included studies to understand what weight they hold within a review. Due to the mixed methodologies of the included studies in my review finding an appropriate quality assessment tool was difficult. I looked at using several different tools and originally started by using the ROBINS I (Sterne et al., 2016) however this tool was very complicated and did not seem to be a good match for the studies I had included in my review. After spending a significant amount of time searching, I came across the Mixed methods Assessment tool (MMAT) (Hong et al, 2018). This immediately felt like a tool that was more suited to several types of methodologies. The MMAT separates the studies by methodologies and then asks specific quality related questions. The guidance for using the MMAT suggested that you do not score the individual studies but rather provide an overall comparison between included studies. On one hand this was useful and I would use this tool again if completing a mixed methods systematic review in future however the lack of score made it slightly difficult to truly evaluate studies independently.

Data analysis

I was keen to undertake a meta-analysis of my included studies, as this provides further accuracy in terms of overall effectiveness of the interventions and measures,

further to examining studies in isolation (Haidich, 2010). Unfortunately, I recognised from early in the process of data extraction that a meta-analysis was most likely not going to be possible due to the heterogeneous sleep outcome measures. Having reviewed the studies following data extraction it was clear that a random effects meta-analysis was not justified, outcome measures, time points and data analysis methods differed significantly.

Following a discussion with the module leader he reassured me that my assumption that a meta-analysis in this instance, would not be justified was correct. We also discussed the fact that several of the studies included in the review had very small sample sizes and therefore would likely undermine confidence in findings if a meta-analysis was conducted. Overall, this was a little disappointing and I reflected that perhaps this was due to the original research question, search strategy and inclusion criteria I had used as they may have been too specific. I spent some time throughout the review searching for additional studies both by using google scholar and looking through the reference lists of included studies, however often when I found one which looked suitable it did not meet my inclusion criteria.

Prior to data analysis and write up, I further examined my studies and decided to exclude one study (Zhou & Recklitis, 2020) based on the fact that it does not include a control group and is a pre/post-test design. It also fell slightly outside of my criteria ‘includes a population of 13-25 year olds with no underlying health conditions’ as the population included had had a previous diagnosis of cancer. This process taught me that is isn’t always straightforward in terms of matching studies to meet inclusion/exclusion criteria and this can be a very nuanced process.

Dissemination

Before writing up my systematic review I searched for journals that would be suitable to submit for publication. I additionally reviewed existing systematic reviews for guidance around publishing to appropriate journals. These activities provided direction for writing up in accordance with the guidance for that journal. I searched specifically for journals that thematically cover digital health interventions and found the SAGE Digital Health journal. I found it a useful exercise to review the systematic

review guidance for this journal and this helped me to shape the structure of my review and consolidate what I should include based on other reviews published in this journal. It is my intention to submit my review to the SAGE Digital Health Journal.

Conclusion

In conclusion, the process of conducting my systematic review was a very lengthy one, stretching out across the whole duration of the national pandemic lockdowns. While I have been involved in conducting systematic reviews previously, this time I was solely responsible for all aspects and stages of the review which, at first, felt like a significant challenge. I effectively utilised reflective practice at each stage of the review and this helped me to become more accurate and thorough at times where I would have been inclined to skip over the detail. I realised that while I was striving for a ‘perfect’ review and meta-analysis, the early stages of the review had a significant impact on the later stages and outcome of the review. I also reflected that these initial processes were not always within my control. While my skills in record keeping, screening and data extraction have all improved while conducting my review, in the future if conducting another review of this nature, I would concentrate more of my time initially refining my research question, inclusion criteria and search strategy before running my searches. This may give me a better focus and ability to identify studies that better match my inclusion criteria. Overall, I was proud of myself for maintaining motivation throughout my systematic review and pushing through the more difficult stages, combating arising challenges and aligning learning from external sources.

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2.3 Qualitative Research Manuscript

‘You're all in the same storm but you're all in different boats’
The experience of staff working in a Further Education College during and after the COVID-19 Pandemic: A qualitative interview study

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Abstract

Background

The COVID-19 pandemic, starting with the March 2020 national lockdown in the UK, brought about substantial disruptions to global daily life, with educational staff designated as 'key workers' tasked with remote student support, leading to heightened anxiety and burnout upon their return to work in September 2020.

Aim

The aim of the study was to investigate the experiences of further education college staff returning to work following the COVID-19 lockdown.

Sample

Ten staff working at a further education college in the West Midlands were interviewed as part of this study, participating staff all held student facing roles.

Methods

A qualitative design was used, semi structured interviews were conducted, audio recorded and transcribed verbatim. Transcribed interviews were then analysed using Reflexive Thematic Analysis (RTA) guided by Braun and Clarke’s six stage process.

Results

Analysis of transcribed interviews generated four themes relating to the experiences of college staff throughout the pandemic. These were *‘Individual Differences in Navigating COVID-19 Transitions: Personality, Environment, and Adaptation’; ‘Embracing Positive Change: Work-Life Balance, Flexibility, and Innovation’*; ‘*Navigating Uncertainty: Anxiety During COVID-19 Transitions’; and ‘Embracing a 'New World': Shifting Work Practices and Social Dynamics Post-Pandemic’.*

Conclusion

This research highlights varying experiences, coping mechanisms, and attitudes toward returning to work post-COVID-19. It sheds light on the feelings of staff after prolonged remote work, revealing both positive and negative aspects of the transition. Positive shifts

were evident from remote work during lockdowns, alongside challenges upon returning to the college. Themes revolved around 'change', emphasising the transformative impact of the pandemic on individuals' professional lives, including uncertainties and lasting implications.
Key words: Post-Pandemic, Return, Teaching, Personality, Anxiety, Further Education College

Introduction

The COVID-19 pandemic caused significant disruption to the daily lives of people around the world. In the UK, this initial disruption occurred during the national lockdown of March 2020. Throughout this period, staff working in educational settings were considered ‘key workers’ and many were asked to continue to support students remotely (The Lancet Editorial, 2020). Returning to work in September 2020, as educational establishments reopened, there were reports of increased anxiety and burnout amongst key workers including educational staff (Kim et al., 2020).

The COVID-19 pandemic significantly disrupted education worldwide, enforcing a rapid shift to remote and hybrid learning models. As educational establishments began to reopen, staff faced a unique set of challenges in returning to the traditional classroom setting. Educational staff experienced anxiety, stress, and burnout due to the uncertainties and challenges associated with the pandemic (Vargas Rubilar, & Oros, 2021). This may have been due to several related causes including the requirement to address the learning gaps created during the remote learning period and adapt to diverse student needs (Gurung., 2021). The importance of re-establishing classroom routines and managing student behaviour while ensuring a safe learning environment posed a challenge after an extended period of remote teaching (Brooks et al., 2022). Navigating the integration of technology into the curriculum during and following the return to in person work while maintaining a balance with traditional teaching methods may have also posed a challenge to educational staff returning to face-to-face teaching (Mahaye, 2020).

Quantitative research has provided valuable insights into the experiences of key workers during the COVID-19 pandemic (Ayling et al, 2020). However, a qualitative approach can provide richer and more nuanced data, enabling deeper insights into the reasoning and experiences of FE College staff. Qualitative analysis could build on our understanding of these experiences and provide depth and detail to the accounts of educators who have lived and worked through the pandemic. Discussion of personality types may elucidate individual differences in resilience and stress management amongst educational staff and support previous findings that

personality has a direct link to resilience (Friborg et al., 2005). For colleges this information could inform strategy when supporting staff returning to work after long periods of being at home.

The present study was conducted in a Further Education (FE) college in the West Midlands, UK, comprising of approximately 2800 full and part time students and 1500 staff. The college supports students to obtain qualifications in several academic and vocational subjects from car mechanics to Maths and English. Following the reopening of the College in September 2020 a 'blended learning' approach was adopted with many staff delivering face to face teaching sessions or, when appropriate, working remotely to avoid unnecessary contact with others. In the years following the pandemic there has been extensive research examining the impact of Covid-19 and subsequent transitions on primary and secondary school teachers' experiences (Kim & Asbury, 2020; Kim et al., 2021; Kim et al., 2023; Maitland & Glazzard, 2022). However FE colleges differ from primary and secondary schools by providing students aged 16 and over with a flexible, career-focused curriculum, independent learning, vocational training, and industry links, whereas schools follow a structured national curriculum for younger students with a more rigid timetable and academic focus. Due to these differences conducting a study with staff in the FE environment felt unique and appeared to require further exploration. There were noticeable differences in the experiences of staff returning to college, for example, some embraced returning to in person work while others took a more cautious and reluctant approach. This varied experience has been supported by recent literature examining the relationship between several demographics, including personality type, resilience, and coping mechanisms during the COVID-19 Pandemic (Volk et al., 2020). Studies have explored personality traits using the 5-factor model of personality to examine the responses to COVID-19 and found these to be impactful when exploring adaptive and maladaptive coping mechanisms to the pandemic (Kimhi et al., 2020).

It is evident from recent literature that educational professionals have experienced increased stress throughout the pandemic (Brooks et al., 2022), however it is still unclear why and what contributed to this level of increased stress and what this looked like for those working in FE colleges. Therefore, this study will explore the

research question: What are the experiences of FE educational staff transitioning in and out of lock down throughout the COVID-19 pandemic?

Method

Design of the study

This study employed a qualitative design using semi structured interviews conducted over Microsoft Teams. Semi structured interviews were chosen as they provided flexibility in exploring additional relevant ideas raised by participants during the interview (Eatough & Smith, 2013). To analyse data, Reflexive Thematic Analysis (RTA) was employed to examine the experiences of FE College staff regarding their return to in person work following the Government directed National lockdown which lasted a six-months in 2020 during the COVID-19 Pandemic. RTA is a versatile qualitative method that focuses on interpreting complex experiences, perceptions, and finding meaning. It prioritises researcher reflexivity, narrative exploration, and flexible theme development, making it well-suited for studying wellbeing, workplace transitions, and personal recovery through both data-driven and theory-informed approaches (Braun & Clarke, 2019). RTA allows for an in-depth exploration of personal and collective perceptions of wellbeing and adaptation during a period of substantial change for example the Covid-19 Pandemic.

Braun and Clarke (2021) emphasise that RTA is a flexible process and note that are various epistemological stances that can be employed by researchers when interpreting the data, these include ‘realist’, ‘critical realist’, or ‘constructionist’. For the present study a ‘critical realist’ approach was adopted, meaning that the interpretation recognised both subjective experiences of participants in addition to the social structures and context that these were reported in. This approach acknowledges that language is not an exact reflection of reality but rather that experiences are set in the context of real-world influences. As the experiences of participants were set against the background of the COVID-19 pandemic in an educational setting, data were analysed with these factors in mind.

Participants

According to Braun and Clarke (2021), a sample size of 6-10 participants is suitable for a small study, while medium-sized studies typically involve 10-20 participants.

They emphasise prioritising depth over breadth, focusing on rich data analysis over the inclusion of many participants. In this study, 10 academic staff members from a FE college in the West Midlands, UK, participated. The sample included both teaching and student support staff, all of whom were working-age adults (over 18 years). Of the 10 participants, six were female and four were male. No other demographic data was collected to maintain confidentiality and focus on the professional experiences of staff members. Participants were recruited via a mass email sent to all college staff, inviting them to take part in the study. The inclusion criteria required participants to have been employed at the college both before and after the COVID-19 lockdown (2020-2021) and to be able to communicate in English to provide informed consent.

Ethical Considerations

Ethical approval was awarded from the University of Staffordshire's Research Committee. No further ethics approval was required.

Procedures

Interviews took place between March and June 2021 and were all conducted via Microsoft teams. The study was fully explained to participants, and they were provided with an information sheet prior to consenting to take part in the study. Written consent was obtained from all participants. Interviews ranged from 30 minutes to 1 hour and were an average of 42 minutes in length. As the interviewer was working as a Trainee Health Psychologist within the College at the time of the interviews, it was explained to participants that in this instance the interviewer was not acting as a health care professional and rather was taking a researcher role. It was explained that all data would be anonymised before findings were shared with the wider college.

The development of the interview schedule was informed by previous research which examined the experiences of staff working in person and remotely during the pandemic (Gurung, 2021). The schedule began by focusing on the return-to-work period before expanding to incorporate questions about how participants felt about the transitions of moving into lockdown and working from home during that period. Broad questions were included such as; 'Can you describe the experience of

returning to work in September?' and more specific questions such as 'What (if anything) do you think could have been done to make this transition easier?'. All audio-recorded interviews were transcribed by the primary researcher.

The Myers-Briggs Type Indicator (MBTI) stands as a widely utilised psychological instrument developed to evaluate and classify individuals according to their preferences in personality. The MBTI divides individuals into 16 distinct personality types. Each type is delineated by a blend of four dichotomies: extraversion (E) or introversion (I), sensing (S) or intuition (N), thinking (T) or feeling (F), and judging (J) or perceiving (P). These individual preferences contribute to the formation of distinctive personality profiles, providing valuable insights into how individuals perceive the world, make decisions, and engage with others (Ruston et al., 2007). Staff taking part in the study were aware of the Myers Briggs Personality types, through completion of the personality test at a staff development day where differences in their personality types were discussed. Understanding whether there was an influence of personality types informed the development of some questions which were designed to ask participants specifically about how their individual differences impacted their approach to the transition in to and out of lockdown. For example, 'How do you think your personality impacted on how you felt returning to work after lockdown'.

Data Analysis

Reflexive Thematic analysis (RTA), as outlined by Braun and Clarke (2021), was applied to verbatim transcripts. Braun and Clarke delineate a six-step process for conducting RTA. The initial step involved the researcher familiarising themselves with the data, through re-reading the transcripts multiple times. During this stage, it was crucial to note any initial observations. The second step involved generating codes across the data to identify and group semantic meanings throughout the transcribed interviews. In the third step, overarching themes were sought across the data using the previously grouped semantic codes, resulting in seven themes. This was the stage where patterns across all transcribed interviews started to form. Step four included a review of the identified themes, ensuring that each theme encompasses all the identified codes across the entire dataset. This step entailed combining three sub themes describing different types of anxiety related to the

pandemic and transition into and out of lockdown were combined into one overarching theme called ‘change-related anxiety’. Therefore, seven themes were reduced to four for the final step. The fifth step involved defining and naming the themes, emphasising the need to identify the core meaning of each theme and assigning an appropriate name. The final step, step six, involved producing the report. This included using the final identified themes and illustrative quotes to craft a narrative report.

Researcher Reflexivity

Braun and Clarke emphasise that reflexivity is central throughout the process of conducting RTA (Braun & Clarke 2021). In this study, it was crucial to remain mindful of my role as a trainee health psychologist actively delivering psychological interventions to both staff and students, creating a potential power imbalance. To minimise the influence of this, I took deliberate steps to clearly communicate my distinct responsibilities to participants before conducting interviews. I explicitly stated that my role as a researcher was separate from any therapeutic duties, thereby reducing the risk of confusion regarding my intentions. I also ensured that participants were not engaged in psychological interventions with me at the time of data collection. To the best of my knowledge, this mitigated any potential conflict of interest. I was also acutely aware that the research topic occasionally prompted participants to speak candidly about their employer and colleagues. To avoid potential discomfort, I emphasised confidentiality and anonymity both during the interviews and in any subsequent publication of findings. Upon reflection, I recognised that my recruitment method - sending a group email from a college email address - might have inadvertently implied that the study was part of a college initiative rather than an independent research project. To mitigate this perception, I made adjustments to the recruitment message, clearly stating that the research was being conducted as part of my individual training as a health psychologist. By maintaining a reflexive stance throughout the research process, I remained mindful of how my professional identity and research practices could shape both data collection and interpretation.

Results

Through Reflexive Thematic Analysis four distinct themes were developed from the data these were: *'Individual Differences in Navigating COVID-19 Transitions: Personality, Environment, and Adaptation'; 'Embracing Positive Change: Work-Life Balance, Flexibility, and Innovation'*; '*Navigating Uncertainty: Anxiety During COVID-19 Transitions'; and 'Embracing a 'New World': Shifting Work Practices and Social Dynamics Post-Pandemic'.*

Theme 1: Individual Differences in Navigating COVID-19 Transitions: Personality, Environment, and Adaptation

Interviewed participants discussed a range of experiences across the period of entering the first national lockdown during the COVID-19 pandemic, many of these related to personal struggles throughout the pandemic while others focused on the challenges faced professionally. It was evident, across all interviews, that while participants had all experienced the same phenomenon, their individual experiences had been vastly different.

Participants discussed how they individually managed the transition into and out of the lockdown, these differences were acknowledged and often related to the differing home environments of participants.

"Well, everybody's different. Everybody says you're all in the same storm but you're all in different boats and people have got different family setups, different expectations from home" – Participant 10

"I hate to say this… but we are all on our own journey, I think intrinsically we all know what we can cope with"- Participant 9

There were comments relating to how differing personalities have helped or hindered staff in managing the transition period. Participants usually defined themselves as either adaptable or routine driven in relation to transitioning between face to face and homeworking, one participant described their experience of leaving college to go into the lockdown:

“I mean I'm not very good. The unknown I like to know where I'm where I am, I suppose most people are the same. So, not, not knowing where things were heading was quite, you know, it just made you feel a bit anxious’ – Participant 1

Others described a sense of excitement surrounding entering this unknown period, describing themselves as adaptable and thriving when faced with a sense of uncertainty:

“So, I do, adapt to things very, very quickly, so I don't tend to go into the shock element. I tend to come through that very fast. Yeah, too fast for a lot of people, they're not ready to come with me.” - Participant 5

Participants were asked about and discussed how different personality types impacted on the transition in and out of face-to-face working.

“Several Completer finishers, as a broad brushstroke statement, tend to be the ones who are finding it hardest to come back into the building. It's not always the introverts introvert extrovert doesn't seem to have an impact on it, it tends to be very much completer finisher and attention to detail are the ones that struggle.” – Participant 5

Despite the differences noted by participants in circumstance and personality, participants also commented that there were similarities and a feeling of comradery between all staff. One participant described the process of moving to at-home teaching and back again and how this had collectively required a huge effort from the entire staff body:

“So I quite welcomed the challenge, the big difficulty for me is, yes, you could do everything that you've done 12 months before, but they took twice as long, took three times the effort of trying to do it. So come the summer holidays, absolutely exhausted. Yes, everybody was” – Participant 5

There is some evidence here to suggest that personality traits were perceived to influence the COVID-19 related transitions based on participants’ responses where they highlight specific traits. For example, participants describing themselves as

‘adaptable’ or ‘routine driven’ or more categorically as a ‘completer-finisher’ personality type, which made it easier or more difficult for them when transitioning in and out of home working. This theme explored how the varied backgrounds of participants, ranging from their living situations to their personalities and perspectives, impacted their individual experiences throughout the shift in professional changes during the pandemic. It underscored that, despite facing common challenges, each person's unique attributes contributed to a distinctly personal journey through the pandemic.

Theme 2: Embracing Positive Change: Work-Life Balance, Flexibility, and Innovation

The next theme was characterised by a collective feeling that participants were attempting to embrace the positive changes that were prompted by the COVID-19 pandemic and the resultant periods of being able to work from home. For example, participants reported the benefit of having more time to spend with their family at home, compared to pre-COVID-19 where greater time would have been spent at work:

“I think it's been nice to have time with the children, as well as a family we've bonded a lot, and my girls have become close.” -Participant 1

The ability to spend more time with family was described as a positive benefit by participants, others also mentioned the benefit of having less time driving and more time to spend outdoors in nature:

“…this is going to sound the total opposite that then there was just the joy of small things. The joy of just been able to sit out in a green space in your garden for an hour at lunchtime…” – Participant 6

There were discussions about how the pandemic had prompted beneficial change to working patterns including the ability to work from home following the pandemic. Participants collectively expressed a sense of feeling more relaxed while working at home with the ability to work in peace and get more done.

“We still have the one day at home, but I think I'll be gutted to lose because it's a day where I'm just, I've got peace like just get on with everything”. – Participant 3

Another participant described their hope that the beneficial changes in working patterns following the return to work after the pandemic would be sustained by the college because they felt they had modernised their ways of working making them more efficient while supporting a work/life balance.

“But… So, there was a lot of flexibility there that I thought well this is great! We can keep this and my expectations were that I kind of hope we can be bold and brave enough to keep some of these and it doesn't just all slip back in... Certainly from the education of the learners as well. That yes, obviously, a lot of it wasn’t ideal, practical elements of it were a nightmare. But it was it was kind of a hope. We can change stuff. And I was intrigued to see that we hopefully keep some of the better bits that have come out of the dreadful pandemic”. – Participant 8

Another participant referenced the implementation of new ways of working including the introduction of new technologies. One participant described the positive challenge of learning how to use technology to enable new and innovative ways of working.

“We just did this Teams meeting and you know just the whole thing of how you actually kind of do it… you know the basics of using the chat function and being able to share your screen, it's just a learning curve isn't so I mean I it really enjoyed that aspect of it you know and all the learning the this technology and you know getting to grips with that.” – Participant 1

This idea that the technology and upskilling was a positive and welcome challenge contrasted the assumption that the technology would be a complex and steep learning curve. Staff, however, seemed to take the opportunity to develop their skills and saw this as a positive outcome in a turbulent time.

This theme was identified as staff highlighting and beginning to embrace the new positive outcomes from the lockdown and the subsequent adoption of new work practices despite the general negative experiences that many reported. Among the positive elements that were embraced by participants were increased time to spend at home with family, more flexible working patterns, and improvements in the use of innovative technologies and the development of skillsets. Many staff expressed hope that these benefits would continue in the future.

Theme 3: Navigating Uncertainty - Anxiety During COVID-19 Transitions

The third theme highlighted the anxiety that participants felt as a result of the constant change they were experiencing as they transitioned into and out of lockdown. The anxiety experienced by participants seemed to relate to distinct areas. Participants experienced anxiety related to change and uncertainty around their professional lives and the day-to-day logistics of doing their jobs under challenging circumstances. One participant expressed anxious feelings associated with not knowing what was happening day to day alongside the unknown expectations of transitioning into and out of homeworking:

“Pretty much, sort of I didn’t like the upheaval again its fine once you’re in you know, I've got this many weeks, and then, then you know you've got to go back again so it's the uncertainty raises its head again, so I feel quite anxious about it. But you know, you just have to, at the end of the day you just have to get on with it don't you really. We knew that we had to start opening up.” – Participant 1

Other participants described the chaotic feeling of returning to the college following the lockdown and how returning to work made organising the students much more difficult:

“We must have had about God it must have been like 300 students show up at nine o'clock… It was literally chokka the reception and I just remember [my colleague] looking at me as if to say, ‘what the hell?’. We all stood there, big A3 sheets for timetables, they were all wrong. And it was just absolute chaos that first week back.” - Participant 3

This quote demonstrates the chaos caused by the abrupt shift between at home and in person working and the collective sense of stepping back into this unknown way of working post lockdown. A recurring aspect of this theme was that there was a sense across all the interviews that there was very little certainty and routine throughout the period of going into and out of lockdown. This may have led to a feeling of anxiety amongst staff due to the lack of knowledge or control.

"It was this thing going in the back my head going it will finish next week, it will finish next week. I really, really struggled with this potentially there is no end to this for a long time." – Participant 5

"seemed unreal to me really. I just couldn't believe that it was gonna happen…it was just a bit of a frenetic time" – Participant 1

Participants seemed to hold a shared view that beginning of the lockdown was a very disconcerting time with one participant stating that because of the uncertainty of what was to come you just had to *"Take a deep breath and jump"* – Participant 4

Participants also reported anxiety related to how the students were managing the transition into and out of lockdown and the concern for their wellbeing:

"And there are a few others [learners] who couldn't cope, and we had some of the bridging learners who were the least able who were really struggling with the IT situation." – Participant 5

Many staff who were interviewed talked about their concerns for the learners in the college and much of the anxiety was driven by feeling that learners were left with little support during the transition:

"This was a real, real issue. And we had some young people who… whose mental health was deteriorating very, very rapidly." – Participant 5

Finally participants reported experiencing feelings of anxiety related to the fear of them or their colleagues contracting COVID-19. The fear and uncertainty were described by one participant when going into the lockdown:

“It was that not knowing not knowing what was going to happen next not knowing. I suppose to make it quite dramatic, I suppose but not know who was going to survive this and who you would see again in person who was really that makes it sound really big but it was that feeling of going into the unknown and not really knowing what was next.” – Participant 6

There were frustrations expressed about the safety of the college and this fed into the broader anxiety related to the fear of contracting COVID-19 once returning to in person work. This contrasted feelings that working from home was deemed to be ‘safe’ for staff.

“I was really disappointed. They wouldn't fix the screen, but to me, because we're such a front facing department and we have so many learners who say they're exempt from masks, we know that are, obviously a lot of just say they are and it was frustrating that we didn't feel… like the [department], for instance, they have screens covering the entire desk, but we haven't, but it was just it was just really like. It's really frustrating when someone tells you potentially your life isn’t worth what? £200.” – Participant 3

This sense of frustration and anxiety, in relation to the changes, were expressed by other participants who described that following the return to work they *“didn't like being in college. This college didn't feel like a safe place to be. There's no social distancing in the staff rooms*” – Participant 1. This points to an ongoing feeling of danger of contracting COVID-19 left by the approaches and messaging throughout the pandemic that perhaps isn’t being validated in the work environment, and this is a struggle for participants when returning to work.

The transition from remote to in-person working after lockdown ended triggered significant change-related anxiety among participants due to the transformations they were being forced to go through. Uncertainty about their professional lives, job

logistics, and the chaotic shift between remote and in-person work fuelled this anxiety. Concerns about student well-being, exacerbated by a lack of support and potential mental health impacts, added to this reported stress. Concerns about safety, coupled with frustrations about the lack of support, added to anxiety levels. Fear of contracting COVID-19 heightened overall anxiety, leaving individuals grappling with uncertainties about the seriousness of what they were facing. This theme highlights the widespread anxiety which stemmed from navigating substantial changes and uncertainties during the COVID-19 transition periods.

Theme 4: Embracing a 'New World': Shifting Work Practices and Social Dynamics Post-Pandemic

The final theme focused on the sense that there were some things that changed for the participants during the pandemic. These things may have changed permanently and indicate a new way of living and working in educational establishments, a ‘new world’. Many of the comments made by participants centred around the idea of realising that it is now possible to perform some elements of their job from home and reducing the need to physically be in the college.

“So I think a lot of people would still prefer some time at home. I think it's just a blended approach people didn’t want the extremes, being in five days a week.” – Participant 7

Many of the changes people noted were that the college physically felt different following their return to in person working. While they had previously felt safe and secure in the building, following the lockdown there was a sense, described by some staff members, that the college was different. These physical changes in the college highlighted these differences making the college feel ‘clinical’ e.g. protective screens, the use of masks, one-way systems and consistent COVID testing.

“It’s not like it hugs you as you walk through the door but you used to feel like ‘Yay I'm at work’. This is where all my, my team are in this is like our little, little safe space. It didn't feel like that anymore. It felt quite cold, clinical and not very friendly.” – Participant 2

The changes related to the physical space, but participants also referenced the distance they felt from their colleagues following their return to in person work and how difficult it was to work and interact in this new way:

“it was the kind of that arguing voice in the back of your head going, you don't want to really be interacting with people at the moment because that's what you've been told not to do for how long now. And now all of a sudden they're like yay go talk to people through a plastic screen with a mask over your mouth but yeah go talk to them.” – Participant 2

This participant is explaining that they are experiencing a social impact following the return to work having been expected to only interact online. This has become their new normal and therefore they are struggling with the immediate transition to go back and speak to people in person with the added challenges of COVID-19 preventative measures (i.e. use of masks).

Another participant mentioned the feeling that they had lost the closeness they once felt with their team members:

"And my colleagues, historically I've worked with a quite close-knit team. This time it was quite...We all did our own thing, so it didn't matter if someone was using this Powerpoint, that Powerpoint, so we weren't so internally I didn't feel as harmonious..." – Participant 9

The point the participant is making is that the lockdown had removed a sense of teamwork and cohesion from the college so that everyone was effectively working in isolation (i.e. no longer sharing resources/materials such as PowerPoint presentations). On the return to work this did not immediately return to normal and clearly there was a sense of social distance created by the physical distance the staff had experienced for a significant length of time.

There was some acknowledgement amongst staff that the COVID-19 pandemic had been a collective experience and had bolstered colleague support as people started to return to the workplace.

“Yeah because that support was just there now, so we didn't really clash with one another, I think, because we just wanted the best for each other. I think just sort of shone through, so there wasn’t any friction there was not a.. you know, I think everyone was just happy to be back. Yeah, they knew if there was a problem they’d be supported through it.” – Participant 4

Participant 4 appears to be describing a sense of shared experience bringing staff closer together and therefore providing each other with more support upon the return to work. The fact that they state that they ‘didn’t really clash’ with each other and were just happy to be back seems to express that some staff felt a sense of elation at being back working alongside their colleagues.

While there were mixed views and many of the new ways of working and interacting had taken over from the ‘old ways’ there was a sense that people had missed the opportunity to interact with their colleagues and the students in the college face to face.

“I don't think there was anything too… I don't think there's any really negative I think it was just the fact that the difficulties come from not being able to interact with people.” – Participant 3

This theme delved into the idea of a "New World" emerging in the aftermath of the pandemic, characterised by permanent changes in the way College staff had to learn to work. Participants highlighted the newfound ability to perform aspects of their job remotely, leading to a desire for a blended approach rather than full-time in person working models. Participants described how the physical atmosphere of the workplace had shifted, with safety measures creating a clinical environment that felt distant and less welcoming. This resulted in feelings of social isolation and a loss of teamworking dynamics among colleagues. Despite these challenges, there was a recognition of increased colleague support and solidarity. Participants expressed a

general longing for face-to-face interaction with colleagues and students, indicating a potentially long-lasting loss of interpersonal connections in the transition to the "New World" of work.

Discussion

This study aimed to explore the experiences of college staff as they transitioned into remote, and hybrid working during lockdown and their subsequent return to work amid the ongoing pandemic. The identified themes offer valuable insights into the emotions and encounters of staff members throughout the pandemic and associated lockdowns as well as the re-entering of the workplace following extended absences or periods of uncertainty and upheaval.

Four themes were identified during analysis *'Individual Differences in Navigating COVID-19 Transitions: Personality, Environment, and Adaptation'; 'Embracing Positive Change: Work-Life Balance, Flexibility, and Innovation'*; '*Navigating Uncertainty: Anxiety During COVID-19 Transitions'; and 'Embracing a 'New World': Shifting Work Practices and Social Dynamics Post-Pandemic'.* A dominant connection between the themes was the prevalence of anxiety among the staff, aligning with findings from other studies indicating heightened anxiety levels and mental health challenges in educators during and immediately after the pandemic (Sanmiguel-Rodríguez et al., 2023; Kamath et al., 2022). This is an important factor to consider when examining the successful transition of staff back into the physical workspace, as there is evidence linking stress and anxiety to detrimental physical health outcomes, due to an increase in poor health behaviours associated with different types of anxiety (Mason et al., 2018). Therefore this reported sense of anxiety is an important consideration when supporting staff to move back into the workplace and thrive both mentally and physically in person at work.

Personality and individual differences were found to be perceived as influential factors in shaping the diverse experiences recounted by participants. Varied circumstances at home prompted staff members to articulate both positive and negative aspects of working remotely during the lockdown and readjusting to in-person work once the restrictions eased. This finding links to other studies which

have explored individual differences related to coping and stress (Boštjančič & Galič, 2020). Boštjančič & Galič, 2020, showcase evidence that increased levels of self-efficacy and other personal factors such as gender and age can have a positive impact on reducing levels of sick leave and that shorter levels of sick leave can subsequently increase satisfaction when returning to work. In the study, those who returned to work more quickly reported that they were more satisfied with their work upon their return. Personality has been specifically linked to coping ability; however, inconsistencies in how studies define and measure coping have been reported, highlighting the need for further exploration (Guadalupe & DeShong, 2025). Despite these inconsistencies, this remains a particularly relevant consideration in the context of the current study. The current study has touched upon the impact of specific personality types on the coping mechanisms but not explored this concept in depth. Certain personality types have previously been linked to poorer health behaviours potentially linking certain personality types to poorer health outcomes (Williams et al., 2015). The impact of having a certain personality type and the outcomes when returning to work after a long period of home working or absence would therefore be worth further exploration.

Following analysis of all interviews the following recommendations may offer valuable insights for real-world workplaces. Recognising and valuing individual differences is crucial as educational institutions reintegrate staff following extended absences. Each team member brings a unique blend of experiences and skills, necessitating an understanding of diverse work preferences, communication styles, and coping mechanisms. Colleges should aim to create an inclusive environment by tailoring strategies, providing personalised training, and fostering open communication channels to address individual concerns. This recommendation is in line with research examining how best to promote a sustained return to work following long periods of sickness absence. For example, Dekkers-Sánchez, et al, (2011) found that offering tailor made interventions at different stages within a personal timeline helped to sustain return to work for staff following long term sickness absence. This approach not only enhances the staff's overall experience but also contributes to a harmonious and productive work environment, promoting a sense of belonging and well-being among team members. By acknowledging and accommodating the distinctive needs of staff, educational institutions lay the

foundation for a successful return to work. Embracing individual differences becomes essential for building a workplace culture that values diversity, ensuring a smooth and supportive reintegration process after extended absences. Listening to individual concerns and using a bespoke approach rather than using a blanket process may help staff returning to work following long periods at home. Previous research has outlined some of the strategies that could be used by employers to support staff returning to work, following sickness absence, based on an individual approach, including the need to focus on social support, workload management and improving self-efficacy (Boštjančič & Koračin, 2014).

There were potential contradictions amongst the findings in the study namely that while there was a lot of reported anxiety about the process of returning to work by participants there were also many positive reported aspects about hybrid working and the changes that the Pandemic ushered in. These contradictions have been mirrored by research findings in similar contexts (Ozamiz-Etxebarria et al., 2021). In re-evaluating workplace structures, the adoption of flexible or hybrid working models stands out as a strategic approach to enhance educational staff's satisfaction and performance. This shift acknowledges the positive experiences shared by staff members who found increased autonomy conducive to a good work-life balance. Offering flexibility recognises the diverse needs of the workforce, allowing employees to navigate professional responsibilities while enjoying the comforts of home and more time with their families (Atiku & Ganiyu, 2022). Participants in this study reported anxiety around not knowing what was coming and therefore organisations should consider committing to an approach in policy regarding flexible working models ensuring that employees do not feel anxious that their flexible arrangements will be changed in future, this should create some stability in the workforce. A recent study conducted Interpretative Phenomenological Analysis (IPA) explored the experiences of employees returning to work with common mental health conditions (Nielsen & Yarker, 2024). The study echoed the sentiment of participants in the present study highlighting the need for Management to be aware that making working adjustments and ensuring their employees felt a sense of worth within the organisation as this was a factor that supported a successful reintegration back into the workforce.

Given the potential distance felt by staff members and the challenge of maintaining team cohesion after prolonged absences, workplaces should invest in team building (Babapour Chafi, et al, 2021). A unified approach should be taken, taking into consideration individual differences. It is important to provide everyone with chances to talk openly, work together on projects, and share experiences that transcend individual differences. Technology can also add value when helping staff make connections when working from home (Hopkins & Bardoel, 2023), participants in the study noted this as a positive impact to come from the pandemic. Other studies focusing on the return to work of staff with mental health disorders, highlighted the importance of social support as a facilitator to positive outcomes, enabling employees to thrive when returning to work after a period of absence (Nielsen & Yarker, 2024).

Educational establishments should be mindful of the lasting effects of pandemic-induced anxiety (Flaskerud, 2023). Staff may still feel discomfort in crowded spaces, and the adoption of measures such as regular handwashing, protective screens, and a preference for less crowded environments should be acknowledged and validated ensuring staff feel listened to and valued.

The themes identified provide valuable insight into the nuanced experiences of college staff navigating the transitions between remote and in-person work. The identified themes and recommendations offer a base for further exploration and consideration as workplaces strive to adapt to the evolving landscape shaped by the challenges of the pandemic.

Limitations of the Study and Considerations for Future Research

The present study faced certain limitations that should be acknowledged when considering future research. These limitations contribute to a more nuanced understanding of the study's scope and potential implications.

The study exclusively examined the experiences of participants from only one college, emphasising that the findings should not be extrapolated as the standard for all colleges or educational institutions. Expanding the research across a broader

cohort of colleges could reveal diverse and context-specific themes, providing a more comprehensive understanding of the broader educational landscape.

It is important to recognise that the COVID-19 pandemic was an unparalleled, unforeseen event in modern times. The reactions and experiences of participants during this exceptional period may not necessarily reflect responses to regular occurrences. Considering the unique nature of the pandemic, caution should be exercised in applying findings to situations outside the context of such extraordinary events such as the pandemic. This poses the question ‘what if it were a regular event’, the study prompts contemplation on the potential variations in participant reactions if the pandemic or an event leading to home working becomes a recurring event. Exploring how individuals would navigate similar challenges under regular circumstances could yield valuable insights for preparedness and response strategies.

During the study, the researcher was embedded within the college environment and had engaged in one-on-one therapeutic interventions with staff members and students. Despite the purpose of the study being explained to the participants, this close involvement may have influenced participants' perceptions, as some may have construed the interviews as having therapeutic purposes.

Finally, the recruitment method of sending an email out across the college may have had some impact on the willingness of participants to engage with the study if they felt it had come from an internal source within the college. This method may have caused potential participants to be reluctant to share their experiences and opinions in this forum. Considerations for a more independent approach should be reflected upon.

Conclusion

This research has highlighted the differences and similarities in experiences, mechanisms of coping and outlook toward the transition into and out of lockdown following the COVID-19 pandemic. The study has provided insight into the feelings of staff throughout this unprecedented time and their experiences of returning to work after long periods of home working in addition to their experiences of remote and

hybrid working. The analysis also identified several positives that emerged from the process of remote working during the national lockdown and that staff felt there were both positive and negative changes upon physically returning to the college. Educational establishments should be aware of the anxiety experienced related to returning to work following a long period at home. It is clear not everyone has the same approach or needs when returning to work following long periods of absence. There is also a need for establishments to reflect upon the positive changes that have emerged from the pandemic and a recognition that many of these changes are here to stay.

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2.4 Qualitative Research Commentary

The Experiences of staff working in a Further Education College during and after the Covid-19 Pandemic: Reflective Commentary

Background

In this report, I will reflect upon my experience of conducting research within a further education (FE) college, utilising Gibbs' Reflective Cycle (Gibbs, 1988) as a structured framework to guide my analysis. The reflection will cover my journey through a qualitative research project initiated in 2021, where I sought to investigate and understand the experiences of college staff during and after the Covid-19 pandemic. Specifically, my research aimed to explore the dynamics surrounding the transition to home working during the pandemic and the subsequent return to the college environment once lockdown restrictions were lifted.

The onset of the pandemic forced an abrupt shift in the working environment, pushing staff into a home working model. The transition back into the physical college setting was met with mixed responses; some staff members adapted seamlessly, welcoming the return, while others encountered significant challenges in readjusting to the pre-pandemic work setting. Recognising these disparities, I engaged in discussions with the college's leadership team and the Human Resources department to delve into the underlying reasons behind such varied experiences among the staff. Throughout this period, I reflected on the potential factors that could explain why certain staff members found these transitions smoother in comparison to others. Increasingly I gravitated toward the possibility that these differences could be rooted in personality traits and individual differences, which might have influenced each staff member’s resilience and adaptability. This hypothesis was reinforced by existing research, such as the study conducted by Volk et al. (2020), which established a connection between personality differences and resilience levels. Although this was not the primary focus of my research, it became an integral aspect of the study, prompting me to incorporate questions related to personality traits and individual differences into the interviews conducted with the participants. I have reflected since completing the study that if I were to conduct it again I would put more emphasis on personality and structure questions in a formal way so that participants were asked about their experiences in relation to their self-identified personality traits. I believe this approach would elicit interesting results and insights into the outlook of educational staff when returning to in person working.

I undertook a review of the existing literature, which revealed a substantial gap in the understanding of why educational staff experienced such challenges during the pandemic. This gap highlighted the necessity for more focused research on the topic, specifically within the context of further education. This observed gap guided my decision to explore these ideas further as an aspect in my qualitative research.

To bridge this gap, I designed a qualitative research project, employing a thematic analysis. I conducted semi-structured interviews with a diverse range of staff members to gather in-depth insights into their experiences. The initial setup of the study proved to be relatively straightforward for me, largely due to my prior experience and familiarity with the college environment. Having worked at the college both physically and online, before and during the pandemic, I had a solid understanding of the institutional context, which significantly facilitated the practical aspects of planning the research. This included securing the necessary approvals from the college's administration and recruiting participants from among the staff. Reflecting on this, the importance of familiarity with the specific research context was highlighted.

Through this research, I aimed not only to explore the immediate experiences of the staff but also to contribute to a broader understanding of the factors that influence resilience and adaptability in educational professionals during unprecedented challenges. The findings from this research hold the potential to inform future policies and practices within the college, particularly in relation to supporting staff through significant transitions and crises.

Designing the Research

Opting for semi structured interviews as the means to examine participants' first-hand experiences of working from home and returning to work throughout the Covid-19 pandemic, I selected Reflective Thematic Analysis (RTA) due to its ability to yield rich data and provide meaningful summaries (Braun & Clarke, 2019). The primary research question, aimed at examining the experiences of staff transitioning to remote working and returning to in person working following the national lockdown during the Covid-19 pandemic. Secondly I wanted to understand why some staff found the transition easier or more difficult than their colleagues. Ethical approvals were granted from Staffordshire University ethics committee, ensuring a solid ethical framework for the research project. Receiving approval from the Ethics committee

was a relatively straightforward process, the main challenge I faced was ensuring all my documentation was correct including the information sheet, interview schedule, consent form and debrief sheet for participants. If I was conducting the research again I would use written checklists to keep track of my documentation in this study, as there were many documents to submit for the ethics approval process.

Despite encountering challenges, such as delays caused by unforeseen staff turnover and the broader disruptions of the pandemic, the study aimed to recruit a sample size of 7-10 participants. According to Braun and Clarke (2021), a small qualitative study typically requires 6-10 participants, while a medium sized study benefits from a range of 10-20 to ensure a robust qualitative analysis. I successfully managed to recruit 10 participants and this was likely influenced by my existing relationship with the College, which enabled me to effectively approach and engage potential participants. I was relieved about this as I worried it was a topic that the staff would not generally want to broach, having just lived through it. To the contrary, following some of the interviews, staff commented anecdotally it was nice to be given the opportunity to be asked about their experiences during that time with one member of staff commenting that it was 'therapeutic'. This made me feel pleased that the study was potentially serving a dual purpose in allowing staff to voice their experiences while collecting data that could lead to positive outcomes for the whole college.

After completing the study, I reflected on the recruitment method used - sending an email out to the whole staff body across the college from a college email account – and recognised that this may not have been conducive to recruiting a varied sample of staff. Having come from an internal source, staff who were not aware of my role within the college may have been reluctant to discuss their experiences and opinions about the return to college with me, perhaps believing it was not an independent forum. It equally could have introduced bias for those who did choose to take part in the study. If I were to conduct the study again I would introduce more independent and varied recruitment strategies to ensure a broader sample of staff members.

Conducting the Interviews

Initiating data collection encountered challenges due to COVID-19, necessitating a thorough risk assessment and the implementation of safety measures. I conducted the interviews via Microsoft Teams ensuring safety measures were upheld.

During the period of conducting the interviews, I was simultaneously providing psychological intervention sessions to several staff members across the college, which created a dual-role challenge that required careful navigation. I was mindful of the potential ethical and professional complexities this presented and took deliberate steps to manage it appropriately. I clarified my role at the outset, ensuring that participants understood the distinction between my responsibilities as a researcher and as a Trainee Psychologist undertaking psychological Intervention within the College. Additionally, I reinforced the importance of confidentiality, reassuring participants that their responses would remain anonymous and separate from any therapeutic interactions. Despite these efforts, I noticed that some interviews naturally gravitated towards discussing personal issues, seemingly viewing me in a therapeutic capacity rather than as a researcher. While I aimed to provide a safe space for them to express themselves, I was conscious of maintaining the integrity of the interview process. In these instances, I listened attentively but tried to gently redirect the conversation back to the interview schedule without being abrupt or dismissive. I found this balancing act challenging, as I did not want to invalidate their experiences, but I also needed to ensure that the research objectives were met.

Upon reflection, I recognised the difficulties of conducting research in a setting where I also had a therapeutic role. If I were to undertake a similar study in the future, I would establish even clearer boundaries from the outset and, ideally, separate these roles entirely to avoid any potential role confusion. Additionally, I became aware that some participants were cautious when discussing their colleagues or aspects of the college, possibly perceiving me as an institutional representative. This hesitation reinforced the importance of emphasising participant anonymity and confidentiality, which I made explicit throughout the research process. By ensuring transparency and building trust, I aimed to create an environment where participants felt comfortable sharing their experiences without fear of repercussions. Using Microsoft Teams additionally helped to provide a safe and anonymous space for participants to speak to me. Being online meant participants could arrange the meeting to suit their

schedules and find an appropriate confidential space to undertake the interview.

The discussions with participants revealed that many indeed perceived personality and individual differences as significant factors in their varied experiences during the transition phases.

Data Analysis

The process of transcribing data from audio recordings was sometimes challenging as I often had to stop the recording and re-play the audio to be sure I was correctly hearing and understanding each participant. This process took a huge amount of time and effort but paved the way for effective thematic analysis. Coding the data was in some ways more complex but less time consuming than transcribing it and the iterative nature of this process allowed for the refinement of my themes, acknowledging the complexity of overlapping issues amongst participants. The RTA brought to light insightful patterns, and the quotes I selected played a crucial role in providing a comprehensive understanding of participants' experiences of the transition and return to face-to-face work. I reflected, following this analysis, that it had been a challenge to stay motivated during the more time-consuming elements, such as transcription, but that this process had helped me familiarise myself with the data before the ‘actual’ analysis had begun. Some good learning points arose from this stage of analysis, including that it is vitally important for me to make thorough notes and keep records in order to be able to effectively analyse qualitative data and that sometimes the most time consuming and seemingly tedious parts of qualitative analysis are the most valuable. Although I found the process of transcription and coding a challenge it did allow me to fully immerse myself in the data and better understand the meaning of each of the participants. The process of transcription was an active process where I focused on joining the dots and active listening while typing up the interviews.

Write up and dissemination

Selecting a target journal was somewhat of a challenge as I have not had much experience of conducting research within educational settings. I started by looking at

some of the research that I had used to write the narrative surrounding my study protocol and traced these back to studies with similar methodology and themes. It helped that I had spent a long time when embarking upon my qualitative research examining research in the area to get an idea of a niche for my own study. If I were to do this study again, I would like to reach out to researchers who have experience conducting research in an educational/college setting prior to conducting the research to help me understand the context of research conducted in these settings. I think this would help me gain a better understanding of conducting research in an educational setting before undertaking it, in addition to how best to disseminate findings. I eventually selected the British Journal of Educational Psychology (BJEP) as my target journal for publication as it is a highly respected, peer-reviewed journal that ensures broad visibility among academics, educators, and psychologists. The BJEP publishes evidence-based research in learning, motivation, and cognitive development. I wanted to select a journal that focused on educational settings and would be accessible to educational staff in addition to Psychologists. Further dissemination strategies that I have reflected would be useful for maximum impact following completion of this study include presenting the findings of this study at a conference, seminar or workshop attended by appropriate personnel, for example psychologists and leaders in education and education policy makers such as The British Psychological Society's Psychology of Education Section Annual Conference.

Conclusion and final reflection

Although conducting the qualitative research project initially presented challenges, it became an enriching exploration into the experiences of college staff returning to work following an unprecedented event. The dual role of clinician and researcher posed unique challenges for me, yet the experience significantly boosted my confidence in qualitative research methodologies and improved my overall relationship with the college following our return to work after the pandemic. I reflected that I too, as an employee of the college, at the time had been feeling distant and isolated from my place of work throughout the lockdown and therefore conducting these interviews gave me a sense of shared values with the wider staff body.

The research findings helped guide my recommendations for future practice and research, especially in considering recommendations for educational establishments. The journey has been instrumental in broadening my perspective on data collection and knowledge exploration, positioning me to conduct qualitative analysis in the future. I would like to further explore the psychological impacts of returning to work after a long period of sickness or homeworking and the influences that may govern the ease in which staff transition back to in-person working. I feel this is currently a pertinent topic given the reported drive for many to return to in-office working in the near future (BBC News, January 2025).

Embarking on this study before my maternity leave presented its own set of challenges, ones that I had not fully anticipated. As I transitioned back into work after a year-long break, I found myself grappling with the task of picking up where I had left off. Despite having diligently transcribed my interviews prior to my leave, reintegrating myself into the study demanded more effort than I had initially foreseen. Nevertheless, I was fortunate to have maintained notes and records, which served as a guide to point me back to where I had left the study. These notes and transcribed interviews enabled me to bridge the gap between pre and post maternity leave and ultimately, to resume my qualitative report with renewed insight and motivation.

Despite my notes, listening to the interview recordings again became a necessity as I began to reacquaint myself with the nuances and tone within the participants' narratives. Each conversation contained meaning that I needed to grasp, especially when delving into their experiences during the difficult period of the pandemic. It was more difficult to understand participants' meaning when just reading the interviews in the transcribed form.

Beyond the logistical and technical challenges, there was a deeper struggle that emerged from picking up this study years after starting it. The pandemic, which had begun in 2020, had brought about a huge amount of transformative change over the ensuing four years. Returning to the study to write it up felt like going back in time, attempting to remember a past era that had been altered by the passage of time and the weight of collective experience. It was a poignant reminder, to me, of the

profound impact the pandemic had on all aspects of life, including the Professional Doctorate course I had started in 2019. Wrestling with this, I reflected that I was struggling with the urge to move forward and leave behind the memories of that challenging period, contrasted with the academic necessity of revisiting and understanding it in depth. In hindsight, I recognise that this struggle was one of the most challenging obstacles I faced when completing this study.

Reflection on resubmission process

When I first submitted this piece of work, it did not meet the learning criteria required to pass the competency, so I needed to make revisions based on the feedback from two markers. Initially, I saw this as a significant setback, as I had never had to resubmit a piece of work before. However, after thoroughly reviewing the comments and reflecting on the writing process, I realised there were several areas where I could strengthen the manuscript.

One key improvement was positioning my research within a health psychology context. I achieved this by exploring and comparing my study to existing health psychology research on similar themes, such as personality, return to work, coping, and stress. Additionally, I have reflected that the feedback provided a valuable opportunity to update my understanding of Reflective Thematic Analysis (RTA). Since I began this project, advancements have been made in this area, and I took the time to further justify and refine my rationale for using RTA.

The resubmission process ultimately encouraged me to examine my study more critically, leading to improvements in both its positioning and overall quality to align more effectively with my chosen journal.

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2.5 Quantitative Research Manuscript

The impact of confidence, knowledge and attitudes in individuals with food allergy on the incidence and frequency of having an allergic reaction when eating outside of the home

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Abstract

Background

Food allergy (FA) is on the rise in the UK, with individuals more frequently experiencing allergic reactions when eating outside of the home. While recent laws have gone some way to improving services and safety for those with FA, it is unclear whether an individual's confidence in managing their condition, knowledge about FAs and attitudes towards FA predicts whether they are at higher risk (incidence and frequency) of experiencing an allergic reaction when dining out.

Methods

193 participants with FA were recruited from the UK via PROLIFIC and completed an online survey about their confidence, knowledge and attitudes in relation to their FA. The survey also asked them about whether they had experienced an allergic reaction when dining out and how frequently they had experienced a reaction.

Results

Logistic regression analysis revealed that the overall model significantly predicted the incidence of experiencing an allergic reaction when eating outside the home, explaining 9% of the variance. However, none of the individual predictors (knowledge (r=-0.02), attitudes (r=0.11) or confidence(r=0.05)) were statistically significant. These findings suggest that while the predictors collectively explain a portion of the variance, their independent contributions to predicting allergic reactions are limited. The multiple linear regression model to assess the frequency of experiencing an allergic reaction when eating outside the home was not significant and the individual predictors did not significantly contribute to the model.

Conclusion

While knowledge, attitudes and confidence did not significantly predict the incidence and frequency of having an allergic reaction when eating outside of the home, it is important to note the limitations of the study. Developing methods to capture these variables in a more reliable way may be the first step in understanding how safety and experiences can be improved for people with FA when eating outside of the home environment.

Introduction

Food allergy (FA) is a chronic and potentially life-threatening condition, affecting people of all ages, ethnicities and socioeconomic backgrounds[1]. Categorised as an immune reaction to proteins found in certain foods, FA can be immunoglobulin (Ig)E-mediated or non-IgE-mediated[1]. FA affects approximately 2% of adults and 5% of children[2], meaning it has a substantial impact on the population. FA poses a considerable public health challenge, placing a burden on the healthcare system, individuals at risk of adverse reactions, and their families and caregivers[3]. Exposure to allergens can be life-threatening for individuals with FA, necessitating strict avoidance measures in their daily management [4].

Living with FA can significantly impact quality of life and stress levels[5 6]. Managing FA requires navigating numerous dietary and lifestyle changes to avoid consuming allergens. People with FA often face challenges such as recurrent physical symptoms from accidental exposure, social stigma, difficulty finding safe foods, and the constant need to check food for safety, all of which can impact on their coping ability within their daily life[6]. Adhering to an allergen-free diet can prove challenging, especially in the face of insufficient, lacking, or misleading information about ingredients and food preparation[3]. This issue is especially important when dining out at restaurants and food establishments; customers with FA often consider dining out as risky[7]. Accidental allergen ingestions often occur outside the home environment, with 21-31% happening in restaurants and 13-23% in other dining settings like workplace or school canteens[8]. Responding to these concerns, the EU Food Information for Consumer Regulation, implemented mandates businesses to disclose allergen information related to 14 specified food allergens in December 2014. This requirement applies to various establishments, such as restaurants, takeaway services, food stalls, institutions, workplace and school canteens, and necessitates the provision of allergen information in both written and verbal forms, with written information available within the premises for reference[9]. Several chain restaurants have recently improved their policies around managing allergens and use methods such as asking everyone who comes in to eat whether they have any allergies on arrival, using flags in allergen free food and wiping down preparation areas used to prepare food[10].

While EU regulation is a positive step in managing food allergy outside of the home environment, relatively little is known about how individual's use these resources. Accidental allergen consumption has been found to be associated with gaps in knowledge of staff members and miscommunication[11,12,13, 14]. However it has also been reported food-allergic consumer's behaviours may also contribute to accidental allergen consumption including hesitation to disclose their allergies while dining out for fear of not being served [15,16,17]. Strategies employed by FA sufferers when eating out at restaurants and other food establishments with FA include understanding the law and what should be made available by food establishments. In addition to understanding the seriousness of FA, planning in advance, and asking for the correct available allergen information in addition to having the confidence to manage a food allergy related situation outside of the home environment[18] . Studies have explored an individual's ability to manage their FA. For example, one study examined the role of the big five personality traits in daily FA experiences and found that individuals with greater openness to experience reported challenges, such as going hungry due to the lack of safe food options, difficulty finding suitable groceries, anxiety during social events involving food, feelings of exclusion, and experiencing embarrassment and a lack of understanding regarding their FA[19]. Alternatively, while individuals with high conscientiousness were less likely to feel self-conscious about their FA, they encountered more challenges when dining out, and their positive mood was more affected by allergy-related issues in comparison to their less conscientious counterparts[19]. It is worth investigation, therefore, that certain psychological traits may lead people to have better or worse FA experiences when eating outside of the home environment due to their individual differences.

The psychological traits, confidence, attitudes and knowledge of those with FA are hypothesised as key to effective management of FA when dining outside of the home environment. Studies have examined the impact that improved confidence (self-efficacy), knowledge and attitudes have had on an individual's ability to manage long term conditions, such as asthma[20], heart disease, lung disease, stroke, and arthritis[21]. In addition, research has been conducted to examine and measure methods of improving confidence (self-efficacy) specifically in groups caring for those with food allergies such as parents of children with food allergies [22], and school

nurses[23]. There have been measures designed to examine the knowledge, attitudes and beliefs of those caring for people with food allergies such as the Chicago Food Allergy survey which measures the knowledge, attitudes and beliefs or parents, physicians and the general public[24]. Less is known about the impact of confidence, attitudes, and knowledge on individuals who suffer with FA in accessing and reliably using the allergen information that is available when eating outside of the home. Therefore, it is crucial to understand whether the confidence, attitudes, and knowledge of individuals with FA eating outside the home correlate with the number of allergic reactions they may have experienced.

This study aims to examine the relationship between knowledge, attitudes and confidence in people with a FA and the incidence and frequency of individuals having an allergic reaction when eating outside of their own home. It is hypothesised that, knowledge, attitudes, or confidence will be associated with the incidence and frequency of experiencing an allergic reaction when eating outside the home.

Methods

Design

This study used a quantitative cross-sectional design using an online survey.

Participants

A power calculation was conducted to identify the number of participants required to adequately power the study. To achieve 95% power, with a medium effect size f^2 of 0.3 and a significance level (alpha) of 0.05, G*Power for logistic and linear regression produced a value of n=38 which was rounded up to a sample size of 40.

Participants were recruited via PROLIFIC, a platform that helps researchers recruit participants for their online research, enabling fast and reliable data collection by connecting a diverse range of people worldwide. PROLIFIC also offers ethical pay for participants' time. The platform requires the researcher to upload the link to the survey and set specific criteria that participants must meet prior to taking part. To take part in the study, participants had to be adults over the age of 18 years old,

living in the United Kingdom and have a food allergy (medically or self-diagnosed Each participant was reimbursed for their time completing the study.

One hundred ninety-three participants took part in the survey. One hundred and twenty-three (64%) of the sample identified as female. The age range of participants was 18 to 85 years (median age 55.22, SD = 13.05). Most of the sample identified as White or White British (n=150, 77%) and resided in England (n=157, 81%). 46% of the sample stated that their highest level of education was University Undergraduate (n=90) (Table 1).

[Insert 'Table 1. Characteristics of survey participants' here]

Measures

The development of the survey was informed by existing measures examining knowledge, beliefs, confidence and attitudes in people with food allergies and other long-term conditions including the Chicago Food Allergy Research survey[24] , the KAP survey model[25] and the Illness perception questionnaire[26].

The survey included questions to gather information on 1) demographic characteristics (age, gender, ethnicity, residence in the UK and their highest level of education); 2) food allergy diagnosis (whether participants had received a formal diagnosis and how long they had been aware of the FA); and 3) allergic reaction experiences when eating outside of the home (incidence / frequency) .

The survey was then reviewed by the research team and minor amendments were made to survey structure, item relevance and wording of the statement questions. At this stage the additional question 'what food(s) are you allergic to?' was added for further insight into the study population. The survey was uploaded to Qualtrics and tested by both the primary author and two members of the research team.

The final survey incorporated 16 items measuring psychological constructs: five relating to knowledge of FA, five relating to attitudes regarding FA, and six relating to

confidence of FA management. To create the variables, ‘knowledge’, ‘attitudes’ and ‘confidence’ the mean of each item in the corresponding construct was taken.

Procedure

Ethical approval was granted by the University of Staffordshire Ethics committee. The study survey was conducted online; the survey was created using Qualtrics and advertised to potential participants using PROLIFIC. After reading the information sheet, participants had to consent to the study before they could view the survey. They were also required to provide a memorable word so that, if for any reason, they wished to withdraw from the study they could use this word as the reference, this method was used to ensure anonymity. Participants then answered questions to gather demographic information, details of their food allergy and experience of (incidence and frequency) allergic reactions outside of the home environment. Participants were fully debriefed following engagement with the online survey. It was made clear to participants that there was no obligation to complete the survey and if they wished to withdraw they could do so at any time without providing a reason. Survey responses were stored securely in Qualtrics and analysed in SPSS version 29.0.1.0 (171).

Data Analysis

The data collected in this study was analysed in SPSS, initially assumption checks and data cleaning were undertaken, and the data was transformed and recoded to reverse scores for the survey items. The items within each construct (Knowledge, Confidence and Attitudes) were checked for internal consistency. Cronbach’s alpha scores were calculated for knowledge (0.786), confidence (0.784) and attitudes (0.552). Due to a low alpha score for attitudes, three items were excluded from the variable to ensure the mean was reliable. The new value for the Cronbach’s Alpha for the 2-item attitude scale was 0.810 the correlation between the two remaining items was r=0.680, p<0.001.

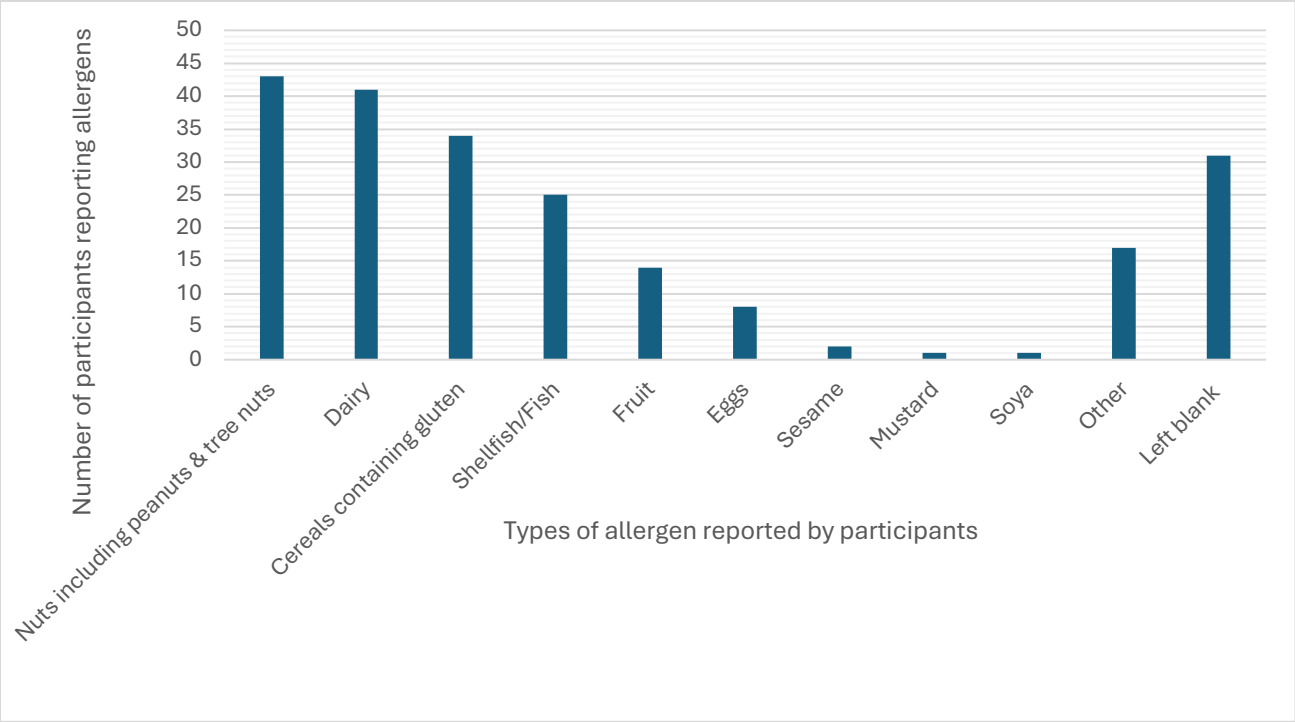
Prior to conducting the regression analysis, Pearson correlation coefficients were calculated to examine the relationships between confidence, knowledge, attitudes and the frequency of allergic reactions outside of the home environment

Results

68% of the sample had formally been diagnosed with a food allergy (n=132) and 62% (n=120) had had an allergic reaction after eating outside of the home environment. Of the 120 people who had experienced an allergic reaction when eating out of their own home 33% (n = 40) had experienced an allergic reaction over five times (Table 1).

Participants were also asked to report the foods they were allergic to. Many reported being allergic to more than one food, although 31 participants did not answer this question. The most frequently stated allergen was nuts with 43 participants stating that they have a nut allergy (Figure 1).

Figure 1. Types of food allergy reported by participants



The results showed that confidence was positively significantly correlated with knowledge (r=0.704, p=0.01), indicating that those participants who felt confident about managing FA also felt knowledgeable about FA. No other factors were correlated with each other or the frequency variable.

[Insert 'Table 2. 'Correlation analysis between survey items' here]

Incidence of Experiencing an Allergic Reaction

A logistic regression was conducted to analyse the relationship between knowledge, attitudes and confidence and the incidence of allergic reaction when eating outside of the home environment. The logistic regression model was statistically significant ($\chi^2(3) = 13.220$, $p = 0.004$). The model explained 9% of the variance in allergic reaction experience (Nagelkerke R^2=0.09) and correctly classified 66.3% of cases. However, neither knowledge (B=0.62, OR=1.86, p=0.060), attitudes (B=-0.37, OR=0.69, p=0.154) nor confidence (B=0.28, OR=1.32, p=0.381) significantly predicted the incidence of an allergic reaction when dining outside of the home. These findings suggest that these factors may not independently contribute to the prediction of allergic reactions in this context.

Frequency of Experiencing an Allergic Reaction

A multiple linear regression was conducted to examine whether knowledge, attitudes and confidence predicted the frequency of having an allergic reaction when dining outside of the home environment. The overall regression model was not significant ($F(3,116 = .944$; $R^2 = 0.02$) p=0.422), accounting for 2% of the variance in the frequency of allergic reactions when eating outside of the home environment. None of the predictors significantly contributed to the model:, knowledge (B=-0.39, p=0.370), attitudes (B=.19, p= 0.203) or confidence (B=0.42, p=0.266).

[Insert Table 4. 'Coefficients' here]

Discussion

This study aimed to investigate the relationship between the knowledge, attitudes, and confidence of people with FA and the extent to which these factors influence the incidence of allergic reaction while dining outside of the home. While finding that the majority of participants had encountered an allergic reaction outside of the home, the analysis found that neither knowledge, attitudes nor confidence predicted these experiences nor the frequency of experiencing an allergic reaction. The fact that over half of participants had recurrent allergic reactions when eating out indicates a gap in both personal and institutional allergy management. As highlighted in previous studies these findings call for a dual approach to tackle this issue: individuals with FA must be better prepared to advocate for themselves, while food providers must implement and follow stricter allergen-control measures. Enhanced communication between consumers and establishments therefore has been stated as playing a significant role in mitigating the risk of allergic reactions in such settings[27].
Previous research has examined predictors of the incidence of allergic reactions and found that alternative psychological traits may be at play when predicting the likelihood of experiencing allergic reactions. A study by Turner et al., (2016) examined the factors that may put people at higher risk of life-threatening allergic reactions, in their study they examine behaviours, specifically risk-taking behaviours as these may be a predictor of having a life-threatening allergic reaction[28]. This follows, as a higher incidence of risk-taking behaviours could lead to trying food without checking for allergens. Another predictor may be unfamiliarity or lack of practice in communicating dietary requirements meaning that those who eat out more frequently are at lower risk as they have potentially more awareness and practice at managing their allergy in these settings which may involve planning and investigating safe places to eat[18].

While the individual predictors were not significant, the results of this study nonetheless highlight critical issues that warrant further attention. Given the upward trend in food allergy cases, doubling between 2008 and 2018[29], it is important to empower individuals with food allergies by equipping them with the knowledge, confidence and attitudes needed to manage their condition effectively when dining in public spaces. Equally important is the role that food establishments play in this dynamic, being held accountable for adhering to the protocols and safety measures

designed to protect FA sufferers, ensuring that their dining experience is safe and free from accidental allergen exposure[30].

Limitations

Several limitations in this study should be acknowledged. The reliability of items assessing attitudes was lower than expected, which resulted in the exclusion of three out of five attitude-related items from the final analysis. Consequently, only two items were considered when evaluating participants' attitudes toward managing food allergies. This raises concerns about the comprehensiveness and accuracy of the attitude measure in this study. Attitude is a multidimensional construct which can range from asking about beliefs and values to actual behaviours[31]. For instance, some individuals may express strong concern about allergens in principle but fail to translate this concern into consistent protective behaviours. In this study, the attitude scale included items such as "I always check food labels for potential allergens," which assesses a specific behaviour, alongside more abstract statements like "Enough is done to accommodate individuals with food allergies in society," which assesses broader societal perceptions. The complexity of the second statement makes it difficult to capture accurately using a Likert scale, potentially contributing to the low correlation of these items. Future iterations of this research should aim to develop a more refined attitude scale that better captures the range of attitudes FA sufferers hold toward managing their condition in public spaces.

Another limitation is that, although the sample size was sufficiently large to achieve statistical power, it consisted of participants recruited through one platform. This recruitment method may have introduced bias, as participants who are active on the PROLIFIC platform may not represent the general population or those with more severe allergies who may be managed through clinical channels. Expanding the recruitment strategy to include participants from clinical samples, as well as the general population, would provide a broader range of experiences and increase the generalisability of the findings. Additionally, such diversity would allow researchers to capture a wider variety of strategies employed by FA sufferers when managing their condition in public settings.

Future Research Directions

Future research in this area should focus on identifying the specific barriers individuals with FA face when dining out at food establishments. By focusing on the roles of confidence, knowledge, and attitudes, researchers can develop a clearer understanding of how these factors intersect to influence allergic reactions in public settings. For instance, investigating whether confidence in communicating dietary needs to staff and understanding food labelling impacts allergen exposure would provide valuable insights. While the current study utilised a quantitative methodology which has been effective for gathering data about a large number of participants. It would also be beneficial to conduct qualitative analysis to complement the current study and understand key factors that may influence and impact confidence, knowledge and attitudes of this target group when designing the survey questions. As there are factors in the survey that are not predictive, qualitative analysis could elicit examination of factors that may be more predictive of the incidence and frequency of allergic reaction within this group.

An important avenue for future research is the development of a more comprehensive and reliable measure of knowledge, attitudes, and confidence of individuals with FA. While the Chicago Food allergy research survey[24] examines knowledge, attitudes and beliefs for parents, physicians and the general public it does not examine the confidence of individuals with FA. This enhanced measure would provide a more accurate assessment of these variables and their role in reducing the incidence of allergic reactions. Additionally, future studies could explore the impact of educational interventions aimed at improving FA sufferers' confidence and knowledge when navigating dining experiences outside the home. By improving these factors, individuals may feel more empowered to make informed decisions and advocate for their dietary needs, potentially reducing the frequency of allergen exposure.

Furthermore, future research should consider the role of food establishments and staff training in ensuring the safety of customers with FA. Investigating the effectiveness of allergen-control measures and how well staff are trained in understanding and accommodating FA would shed light on potential areas for improvement within the food service industry.

Conclusion

This study has raised important questions regarding the factors that influence the safety and overall experience of individuals with FA when dining out. As most participants reported experiencing an allergic reaction outside of the home, it is important that both individuals with FA and food establishments are adequately prepared and can significantly reduce the risk of allergic reactions and improve the dining experience for those with FA. The development of more reliable measures of knowledge, attitudes, and confidence in people with FA, coupled with future research on barriers to safe dining for FA sufferers, will play a crucial role in addressing this growing public health concern.

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Tables and Figures

Table 1. Characteristics of survey participants

Participant Characteristics	**Adults N (%)**
Country of residence	
England	157 (81)
Scotland	21 (11)
Wales	6 (3)
Northern Ireland	2 (1)
Republic of Ireland	7(4)
Age (Years)	Median 55.22 years (SD = 13.05)
Gender (% Female)	123 (64)
Ethnicity	
White or White British	150 (77)
Black or Black British	18 (9)
Asian or Asian British	13 (7)
Mixed or multiple ethnic groups	10 (5)
Other	2 (1)
Highest level of education	
Secondary school	14 (7)
College/Sixth form college	38 (20)
University Undergraduate	90 (46)
University Postgraduate	48 (25)
Other	3 (2)
Food Allergy Characteristics	**Adults N (%)**
Diagnosed with a food allergy	132 (68)
How long you have been aware of your food allergy	
Less than a year	26 (14)

1-3 years	21 (11)
3-6 years	27 (14)
6-10 years	33 (17)
10-20 years	39 (20)
Over 20 years	47 (24)
Experienced an allergic reaction outside of the home environment	120 (62)
Frequency of experiencing an allergic reaction	
Once	20 (10)
Twice	27 (14)
3 times	24 (12)
4 times	7 (4)
5 times	2 (1)
5+ times	40 (21)
Never	73 (38)

Table 2. Correlations

		Confidence	Knowledge	Attitudes	Frequency of Allergic reaction
Confidence	Pearson Correlation	1	.704**	-.098	.057
	Sig. (2-tailed)		<.001	.175	.538
	N	193	193	193	120
Knowledge	Pearson Correlation	.704**	1	-.080	-.020
	Sig. (2-tailed)	<.001		.267	.827
	N	193	193	193	120
Attitudes	Pearson Correlation	-.098	-.080	1	.114

	Sig. (2-tailed)	.175	.267		.214
	N	193	193	193	120
Frequency of Allergic reaction	Pearson Correlation	.057	-.020	.114	1
	Sig. (2-tailed)	.538	.827	.214	
	N	120	120	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3. Variables in the Equation

	B	S.E	Wald	df	Sig.	Exp(B)
Confidence	.279	.318	.767	1	.381	1.322
Knowledge	.622	.331	3.525	1	.060	1.863
Attitudes	-.367	.257	2.037	1	.154	.693
Constant	-1.777	1.282	1.922	1	.166	.169

Table 4. Coefficients

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig
	Beta	Std. Error	Beta		
(Constant)	2,832	1.469		1.927	.056
Confidence	.424	.388	.142	1.118	.266
Knowledge	-.386	.429	-.115	-.901	.370
Attitudes	.198	.155	.118	1.280	.203

2.6 Quantitative Research Commentary

The impact of confidence, knowledge and attitudes in individuals with food allergy on the incidence and frequency of having an allergic reaction when eating outside of the home: A Reflective Commentary

Background

In this commentary I reflect, using Gibbs Reflective Cycle (1988), on my experience of designing, implementing, and writing up a quantitative research project. The project was conducted while I was working at a regional organisation tasked with facilitating the implementation of health innovation. My role within the innovation organisation has allowed me to apply a variety of skills gained throughout my Professional Doctorate; however, since the organisation does not directly manage data sets or access clinical populations, I chose to seek opportunities outside of my work placement to complete this quantitative research.

I have a long-standing interest in the psychological dimensions of living with food allergy which inspired this research project. Personally, having had a nut allergy from birth, I have always been fascinated by the psychological and social challenges that face individuals with food allergies. During my master's in health psychology, I conducted research on hospitality staff's perceptions of food allergies and intolerances, which further fuelled my interest in the topic. My master's research sparked initial interest into the psychological aspects of food allergies, and as I started my Doctorate, I knew I wanted to continue exploring these themes. Upon reviewing the current literature, I identified a gap related to how psychological factors, specifically confidence, knowledge, and attitudes, among individuals with food allergies contribute to their likelihood of experiencing allergic reactions when dining outside the home.

The decision to investigate these variables was influenced by the rising number of people diagnosed with food allergies (Conrado et al., 2021), as well as troubling statistics highlighting the incidence of life-threatening allergic reactions occurring in

restaurants and other food establishments outside of the home environment (Rotella & Oriel, 2022). This trend, combined with my personal experience, motivated me to design a study aimed at deepening the understanding of psychological factors that might influence food allergy management and safety in public settings. By focusing on confidence, knowledge, and attitudes, I aimed to examine how well these factors contribute to the incidence and frequency of experiencing an allergic reaction when eating outside the home.

Study Design

The study was designed to assess how confidence, knowledge, and attitudes of individuals with food allergies, predict the incidence and frequency of experiencing an allergic reaction when dining outside of their own home. These variables were chosen based on existing research that suggests they may play a role in how individuals manage long term conditions in other settings (Kaul, 2011; Lorig et al., 2001).

I decided to use a cross-sectional design, where participants were asked to complete a survey that measured their knowledge about food allergies, confidence in managing their condition, and attitudes toward risk in dining environments. These variables were then used to predict whether participants had experienced an allergic reaction when eating out and the frequency of experiencing a reaction. The objective was to explore the relationships between these psychological factors and real-life allergic experiences (incidence and frequency), potentially providing insights into how these variables may serve as protective factors, or risk factors, in the context of dining out. I found the process of designing the study to be one that took considerable time to formulate, planning in stages and discussing my ideas with my tutors really helped guide my thinking when designing this study.

Measures

My aim was initially to use a validated measure that could capture the psychological dimensions of confidence, knowledge, and attitudes related to food allergies. I reviewed several potential measures, including the Chicago Food Allergy Survey (Gupta et al., 2009) and the FASE-P (Knibb et al, 2015) which appeared promising at first. However, after further examination, I determined that these surveys were

designed for parents, schoolteachers, or physicians who care for children with food allergies, rather than individuals managing their own allergies. As a result, they did not adequately align with the focus of my study, which was centred on self-perception and self-management among individuals with allergies.

This led me to the decision to develop my own measure which I initially felt a bit unsure about. Designing a custom scale allowed me to tailor the items to the specific objectives of my research, I recognise in hindsight that this may have been a limitation. Developing a validated measure requires a lengthy process of item development, testing, and validation, which I was unable to fully undertake within the scope of this project. As a result, the measure I designed may not have been as robust as pre-existing validated tools. Reflecting on this, I now realise that a more thorough review of the literature might have uncovered alternative tools that were better suited to my research. However, the experience of designing and refining the measure has given me valuable insight into the complexities of psychological assessment in research.

Participants

In terms of participant recruitment, I initially considered social media as a potential method. However, when reflecting on my previous research experience, I was hesitant to use this approach again. During an earlier project, I had experienced difficulties recruiting a sufficient number of participants through social media platforms, despite active efforts to promote my study. Recruiting through social media can be unpredictable and time-consuming, with challenges such as reaching a target demographic and ensuring participant engagement. Therefore, I explored alternative options.

After discussing these challenges with academic advisors and colleagues, I decided to use PROLIFIC, an online platform that facilitates participant recruitment for academic studies. PROLIFIC allowed me to efficiently access a large, diverse participant pool and apply specific inclusion criteria, ensuring that the individuals who participated in the study met the necessary criteria. One of the benefits of using PROLIFIC was its ability to recruit participants quickly and ethically, as the platform compensates individuals for their time and ensures that ethical standards are met.

The platform includes several safeguards to ensure data quality, such as timestamps to track how long participants spend completing surveys. These features made PROLIFIC an appealing option for my study, as I could tailor my recruitment strategy to the specific needs of the research and gather data efficiently.

A significant consideration during the recruitment process was how to define and identify participants with food allergies. There are several categories of food-related conditions, including medically diagnosed food allergies, food intolerances, and individuals who self-identify as having a food allergy without a formal diagnosis. This distinction is important because individuals with intolerances or other dietary restrictions (such as Coeliac disease or Crohn's disease) may experience different challenges and reactions than those with food allergies. However, for the purpose of this study, which focused more on psychological factors rather than physiological differences, I opted to allow participants to self-identify whether they had a food allergy, regardless of formal diagnosis. This decision allowed for a broader participant pool, but I now realise that it may have introduced variability into the results, as individuals with different dietary conditions may have different experiences of allergic reactions. In future studies, I would consider implementing stricter inclusion criteria to differentiate between these groups and ensure greater clarity in the data.

Ethics

As part of the research process, I submitted an ethics proposal to the University of Staffordshire ethics committee. The participants were members of the general public rather than a clinical population, and the study did not require direct medical information, the ethics committee approved my application with minimal revisions. The approval process reinforced for me the importance of considering ethical implications in every stage of research, especially when dealing with health-related topics, even if the research population is not considered vulnerable by clinical standards.

Data Collection

The data collection process presented several challenges for me, particularly regarding how to identify and recruit a sufficiently large population of individuals with

food allergies. While I initially considered using social media, I decided that it was not the most effective route for this study, given my limited online presence and previous difficulties with recruitment through these platforms. After consulting with academic staff and students on my course, I opted to use PROLIFIC, which provided a more reliable and controlled method of recruiting participants in large numbers.
I spent a significant amount of time ensuring that my survey was properly set up using Qualtrics, an online survey tool, and that my criteria on PROLIFIC were correctly defined. One feature I implemented was the use of a validation link at the end of the survey, which participants had to click in order to confirm that they had completed the survey and be reimbursed. This step was included to prevent participants from rushing through the survey without providing thoughtful responses. However, upon reviewing the data, I discovered that several participants had missed and not clicked the validation link. Initially, I rejected their responses, but after receiving messages from participants explaining that they had missed the link, I decided to accept their data. Reflecting on this, I realise that I could have made the validation step more explicit, as some participants may have overlooked it due to simple human error. In future studies, I would make the validation process clearer and easier to follow.

Data Analysis

For the analysis, I initially planned to conduct a correlation analysis using SPSS. However, after reviewing the research questions and hypotheses, I determined that regression analysis was more appropriate for understanding the predictive value of the variables in question. This shift in approach required me to refresh my knowledge of SPSS and statistical analysis, which I had previously used during my undergraduate and master's degrees. The process of exporting data from Qualtrics into SPSS was relatively straightforward, and I was able to prepare the raw data for analysis with relative ease.

One challenge I encountered was concerning the reliability analysis of the attitude variable. The Cronbach's alpha for this scale fell below the acceptable threshold of 0.7, and the items within this variable were not well correlated. After discussing this with my research supervisor, I decided to remove several poorly correlated items from the scale, leaving only two items that were more strongly correlated and had a

higher Cronbach's alpha. Reflecting on this process, I realise that the initial design of the attitude scale may have been too broad, as it included questions that addressed both attitudes toward behaviour and attitudes toward perception. These two dimensions may have been too distinct to group together within a single variable. In future research, I would consider designing more specific attitude measures and including more items in each scale to ensure stronger reliability without overwhelming participants with too many questions.

Limitations and Future Directions

Despite the insights gained from this study, there were several limitations that I needed to reflect on. First, the decision to allow participants to self-identify as having a food allergy may have introduced variability into the results. As mentioned earlier, individuals with food intolerances or other dietary conditions may have different experiences of allergic reactions than those with medically diagnosed allergies. In future research, I would consider implementing stricter inclusion criteria to differentiate between these groups and ensure greater clarity in the data.

Second, the measures I developed for this study, while tailored to the research questions, lacked the validation process that accompanies more established measures. I reflected that future studies should aim to use existing validated tools or go through a more rigorous process of measure development and testing before implementing new scales to ensure they are psychometrically sound.

Finally, the cross-sectional nature of the study limits the conclusions that can be drawn about causality. While the results suggest that confidence, knowledge and attitudes may not individually play a role in reducing the incidence or frequency of allergic reactions, the direction of this relationship cannot be fully established from a single point in time. Future research could use longitudinal designs to explore how these variables change over time and how they influence the long-term management of food allergies.

Dissemination

Once the study was completed and the results analysed, I began the process of preparing the study for publication. I spent considerable time researching potential journals and was pleased to find that many high-impact journals in the field of allergy research, such as *Allergy* and *The Journal of Allergy and Clinical Immunology*,

publish both physiological and psychological studies. Given the interdisciplinary nature of my research, I tailored my manuscript to meet the guidelines of *Allergy*, with the goal of reaching as broad an audience as possible that includes both clinicians and researchers interested in the psychological aspects of food allergy management.

Conclusion

Overall, this research project provided a valuable opportunity to apply and expand the quantitative research skills I have developed throughout my academic career. The process of designing and implementing a quantitative study, analysing the data, and interpreting the results has only enhanced my understanding of statistical methods, particularly regression analysis, and reinforced the importance of careful study design and rigorous data collection.

Looking ahead, I am keen to continue exploring the psychological dimensions of food allergies. This project has highlighted the importance of psychological traits in managing food allergies which, I believe, deserves further attention in both research and clinical practice. Given the rising prevalence of food allergies worldwide and the potential for severe allergic reactions, research in this area has the potential to make a meaningful impact on individuals and public health.

Going forward, as a trainee Health Psychologist, I want to remain actively involved in food allergy research. My hope is that this research will contribute to the development of better management strategies and support systems for individuals living with food allergies, ultimately improving their quality of life and safety.

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Chapter 3. Psychological Intervention

3.1 Face-to Face Case Study

Background and Introduction

The year 2020 was exceptional due to the Covid-19 Pandemic and subsequent national lockdown (World Health Organisation. 2020). During my time on placement at a Further Education (FE) College in the West Midlands, many teaching and educational support staff have been faced with rapid and challenging adjustments to their working patterns and personal lives. There has been noticeable burnout amongst FE staff, as reported anecdotally by the HR team working across the College group and empirically examined across educational staff globally (Besser et al., 2020). This has led to an increase in sickness absence and general wellbeing concerns for staff members.

In August 2020, prior to the return to College after the summer holidays I began to design a psychological intervention referral pathway within a FE College, enabling staff to access Health Psychology based Psychological Intervention services. This included one to one support for adjusting diet or exercise or managing a long-term condition. Many staff took advantage of this offer and contacted me to arrange an initial session. As I am currently working remotely, due to the impact of the Covid-19 Pandemic, all face to face sessions have been conducted using the online platform Microsoft Teams.

Here, I describe a case study in which I designed, developed, delivered and evaluated a 6-session intervention for a Client known here as pseudonym ‘Ms T’, a woman aged 38 with a diagnosis of Chronic Fatigue Syndrome (CFS). The client referred themselves to me because they were struggling to manage fatigue symptoms following a return to work after the national lockdown. The lockdown has meant many staff were working remotely from March 2020-September 2020 returning to work with a blended asynchronous approach in September. Ms T wanted support to manage fatigue symptoms while working from home and manage the new routine of adjusting to life back at work.

Assessment

Assessment involves the process of identifying the client’s core issue and determining what they would like to focus on. I initially met Ms T in September 2020. Ms T is female, in her late 30s living with her partner. She contacted me by email explaining that she had been struggling with the symptoms of Chronic Fatigue Syndrome (CFS) and the impact the condition is having on her work and ability to function day to day. I arranged an initial

session with the Ms T to gather information about what she hoped to gain from the sessions, what she would like to work on, and her expectations.

Ms T received a diagnosis of CFS in 2018 and experiences both physical and cognitive fatigue. She initially asked for support in managing the condition and help with handling a work life balance in addition to managing her other commitments. Additional aspects that Ms T mentioned in our first meeting included working on improving motivation and weight management. She also indicated that she would like support in identifying and managing strategies to manage stressful situations at work and home. I wanted to make sure that I understood exactly what Ms T wanted to focus on in our sessions. It has been shown that Clinicians often do not elicit the patient's agenda, which can reduce the impact of the intervention, as the clinician will not correctly focus on the priorities that matter most to the client (Ospina et al., 2018). Ms T stated that her primary issue was her lack of energy and not being able to manage work and home life simultaneously.

Chronic Fatigue Syndrome (CFS) is sometimes also known as Myalgic Encephalomyelitis (ME) and is predominantly defined as causing a feeling of extreme tiredness and post exertion fatigue. It can cause muscle and joint pain, flu like symptoms and cognitive problems including difficulty concentrating or remembering things (National Institutes of Health, 2017). CFS is more prevalent in women (Lim et al., 2020) and tends to start developing between the age of 20 and 40 (NHS website, 2021). Severity of the condition can vary from day to day and symptoms can differ between individuals. CFS can be difficult to diagnose as there is no formal assessment and is often diagnosed after ruling out other conditions. Quality of life has been shown to be extremely poor in individuals living with CFS, unemployment is high and up to 29% people with CFS/ME report being completely house bound (Hvidberg et al., 2015). Treatments can include Cognitive Behavioural Therapy (CBT), Graded Exercise Therapy and medication to manage pain and support with sleeping problems (Whiting et al., 2001) although there is still not enough rigorous evidence showing effective and reproduceable results for any one treatment (Kim et al., 2020).

Ms T had been experiencing CFS symptoms for approximately 4 years and was diagnosed 2 years ago. She had previously attended a CFS support group, but this was halted due to the Covid-19 pandemic. In our initial assessment she described how a bad flu and a series of difficult personal events had led to her feeling fatigued all the time and experiencing what she calls 'Brain fog', meaning she finds it difficult to concentrate and remember information. The events the client described centred around her family and incidences that had affected a number of family members and left her feeling depleted in energy and out of control. She

explained that her condition has had a significant impact on her life, and she feels she has no energy left after work to complete simple day to day tasks or do anything enjoyable.

In this initial assessment I attempted to get a sense of Ms T's daily routine and what her patterns consisted of so that I could understand where she wanted to focus her energy and where she felt like she was losing energy throughout the day. I considered it important to understand the context of physical surroundings and opportunities to fully develop a successful intervention (O'Cathain et al., 2019). The assessment process includes gathering an understanding of what is possible for the client to achieve by understanding the history, patterns and current functioning (Persons. 1989). Therefore, following this initial assessment I asked Ms T to complete an activity diary. This activity diary formed part of the intervention and was successfully completed by the client throughout the course of the intervention and was reviewed briefly in each session. It has been suggested that diaries can be effective for both therapist and client as they can highlight areas that need particular focus and can work as an intervention by themselves, in terms of the client's ability to monitor their own behaviour (Hymer. 1992). Research has also suggested that diaries are effective for CFS sufferers to assess their health status and level of fatigue (Goudsmit et al., 2012).

During the assessment session I attempted to build rapport with Ms T as evidence indicates that good rapport with a client is positively correlated with achievement of outcomes (Leach, 2005). This would provide us with an effective therapeutic relationship to be able to enact behaviour change in addition to making Ms T feel more at ease. The assessment also involved empirically baselining how Ms T thinks and feels about her condition and symptoms. The measures outlined in Table 1. were used for both baselining and evaluation.

Table 1. Description of Baseline and Evaluation Measures

Measure	**Author**	**Rationale**
Chalder's Fatigue Scale	Chalder et al., 1993, Cella & Chalder, 2010	To assess the severity of client's fatigue symptoms at the beginning and end of the intervention. It accounts for both physical and mental fatigue
Fatigue Impact Scale	Vanage et al., 2003	To assess the impact of the client's fatigue on her life at the beginning and end of the intervention. It takes into account the daily impact of Fatigue

Brief Illness Perception Scale	Broadbent et al., 2006	To assess the client's understanding and perceptions around the impact on having the condition as part of her identity as well as her perceptions of the consequences of CFS, the cause, how long it would affect her and personal control over her condition and symptoms

Formulation

In addition to helping to plan the intervention, effective Formulation provides the client with a sense of what they can expect from the intervention in addition to providing a sense of hope that there is a method to help them improve (Corrie, Townend & Cockx, 2016). Formulation has been shown to enhance the relationship between therapist and client as the client begins to feel that they are part of the formulation process and therefore the intervention outcome (Nattrass et al., 2014). Informed by the initial assessment meeting and questionnaire scores, I worked alongside Ms T to develop a five areas formulation (Greenberger & Padesky, 1995) (Figure 1. Case Formulation - Ms T). This method of formulation is based on Cognitive Behavioural Therapy (CBT) (Beck, 1979), CBT is known to assist clients in defining challenges and identifying the impact of their attitudes and thoughts on their behaviour. The emphasis is on changing perception to promote cognitive reframing and subsequently behavioural improvement (Beck & Dozois, 2011). CBT has been shown to be effective in treating those with long term conditions and low level depression (White, 2001; Brassington et al., 2016) in addition to studies demonstrating efficacy in treating patients with CFS (Kim et al., 2020; Prins, Bleijenberg & Van der Meer, 2001).

CASE FORMULATION – Ms T

Client details: Ms T is a 38 year old female, who lives with her partner and works in an educational/library setting. She has 2 children and a dog. Ms T's interests include reading, gardening, cooking, animals and being outdoors. She enjoys work, keeping busy and going on holidays.

Fatigue Background: Ms T received a diagnosis of CFS in 2018 and has experienced both physical and cognitive fatigue as a result of her condition. Ms T developed a severe 'flu like' illness in 2016 which she attributes to developing CFS alongside a number of difficult personal events including death in the family and a custody battle for her partner's children. She has experienced a worsening of symptoms over the past 3 years which led her to join a support group for people with ME/CFS. Ms T found some of the information about her condition useful, but she did not respond well to the 'group' format of the support group and the sessions ended as the pandemic began in 2020.

Fatigue Present: Ms T continues to experience symptoms of fatigue, both physical and mental. She finds it difficult to concentrate for long periods of time and becomes easily fatigued by physical tasks. Her fatigue fluctuates daily and sometimes causes her to be exhausted for several days following a burst of energy, forcing her to take time off from work. Ms T then feels guilty about missing time off from work and feels that her line manager does not think she is working hard enough while working from home. The pandemic and subsequent lockdown have caused Ms T to experience anxiety around the uncertainty of her working pattern as she is not able to rely on a normal routine.

Additional Factors

Ms T feels she has a challenging relationship with her line manager who Ms T believes does not understand her condition and how it impacts on her work.
Ms T's partner suffers from anxiety and relies heavily on her support
Ms T's parents in law rely on Ms T for support, e.g. doing the shopping for them.
Previously she feels she has not been taken seriously by healthcare professionals regarding her condition.
Ms T's activity diary shows a slump in energy at the second half of the week, using the weekend to recover, the physicality of her work causes a decline in activity by Wednesday into the end of the week.

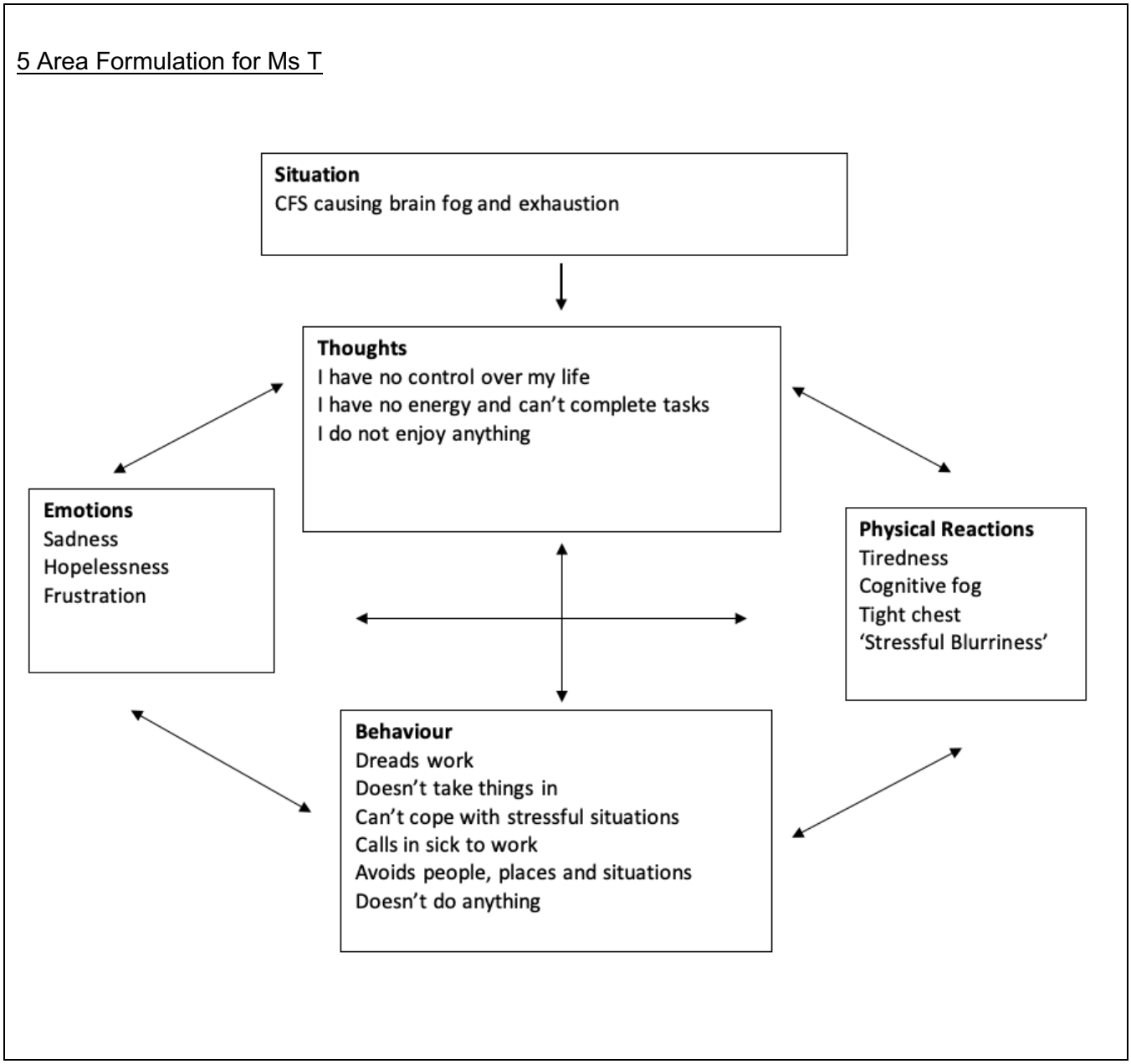

Figure 1. Case Formulation for Ms T

Designing and planning the intervention

I decided that an initial 6 sessions of no more than an hour was suitable, this corresponded with the amount of time the client was able to take out of her normal routine. There is some evidence to suggest 6-8 sessions is optimal for a CBT based intervention for clients with mild to moderate depression and a long term condition to be successful (NICE guidelines., 2021). The following elements were incorporated into the design of the intervention.

Behaviour Change Techniques

I explored using the COM-B model (Michie et al., 2014) and incorporating specific behaviour change techniques as part of my intervention with Ms T. The COM-B model posits that for a behaviour change to occur, three elements; capability, opportunity and motivation have to be addressed (Michie et al., 2011). I wanted to avoid being too formulaic in my use of these behaviour change models and used elements of the COM-B and behaviour change taxonomy (Abraham & Michie, 2008) throughout my intervention with Ms T, in line with a recent exploration into the benefits of variability in the models Health Psychologists use in practice to suit individuals (Ogden., 2016). Agreeing goals and committing to action are behaviour change techniques as described on the Behaviour Change Taxonomy (Abraham & Michie 2008). Part of the Intervention involved helping Ms T set goals and review these. Setting an agreed and specific goal with the client can help the client make positive change and can reduce feelings of helplessness (Kennerley, Kirk & Westbrook, 2017). I planned to use the COM-B model to ensure that the goals that Ms T set in the session were achievable based on her Capability, the Opportunities available to her and her current Motivation as per the COM-B model.

Psychoeducation

A significant and fundamental part of the intervention was psychoeducation to help Ms T understand more about her condition. At the beginning of our sessions she stated that she didn't know very much about CFS and had felt dismissed by clinicians she had seen in the past. It has been shown that when people are more informed about a long term illness, specifically CFS, they are better able to manage the symptoms of the illness (Lukens et al., 2006). Throughout each session I reviewed Ms T's understanding of her condition and provided her with a booklet about her condition that we worked through together. I spent time explaining the cycle of Fatigue (Figure 2. Cycle of Fatigue), which appeared to help Ms T understand why she was so tired due to her illness and was intended to relieve frustration.

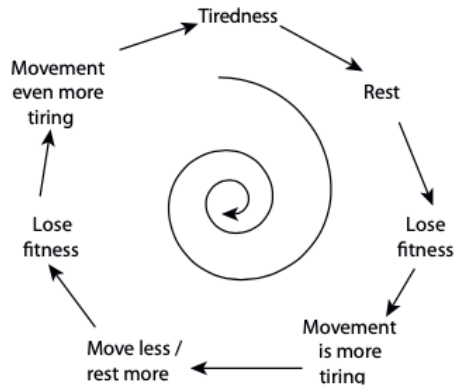

Figure 2. Cycle of Fatigue

Use of Socratic questioning

Effective CBT relies on a technique known as Socratic Questioning (Clark & Egan, 2015). Socratic questioning involves posing a series of concentrated, open-ended questions to elicit thought and reflection in the client (Clark & Egan, 2015). The methodology can generate useful insights and aids in the identification of constructive thoughts by highlighting information that was previously hidden from our consciousness. Using Socratic questioning was particularly insightful during the assessment and formulation of Ms T's presentation, additionally during delivery of the intervention to elicit deeper understanding and meaning from our dialogue during the sessions.

Pacing

An important element of the intervention was to provide Ms T with the skills to manage the symptoms of her long term condition (CFS). Pacing is a technique that involves reserving energy in a regular pattern over time rather than immediately using a burst of energy and overexerting, only to feel depleted afterwards (Goudsmit et al., 2012). As part of the intervention I wanted to discuss putting boundaries in place and managing other people's expectations of how much she was able to undertake. The effective application of pacing for patients with CFS involves a significant behavioural change to adjust their lifestyle in order to adhere to pacing techniques (Goudsmit et al., 2012) and therefore I wanted to combine information about Pacing with effective behaviour change techniques giving Ms T back a sense of control over her symptoms.

Delivering the Intervention

I attempted to deliver the intervention using a dynamic approach in line with evidence which suggests that successful intervention involves continuous iteration and involvement of the client throughout delivery (O'Cathain et al., 2019). At the end of each session with Ms T I summarised broadly what we had discussed and confirmed this with her. I made thorough notes following each session and adapted what I thought our next session should consist of based on the last session, in this way I was able to practice active listening as part of a client driven approach (Lester., 2002). Table 2. outlines the original design of my intervention for Ms T and a detailed account of what happened in each session.

Table 2. Outline of 6-session Intervention plan and actual session delivery

Session	Plan for session	Actual session
1	Introduction to Health Psychology and my role Build rapport Information gathering understanding the Client's journey and where she is now Identify and understand achievable (short term and longer-term) outcomes (i.e. cook dinner two nights a week/feels less fatigued) Summarising her situation	Introduction to my role and Health Psychology Introduction to the client – talking through her interests and role to build rapport Discussion about CFS and the lead up to her diagnosis Discussion about keeping a diary and why this would be useful
2	Review baseline assessments Reviewing the diary Understanding how the Client feels now Share formulation with client – CBT-based formulation Tweak and refine initial understanding of achievable outcomes	Further information gathering from client about how her lack of energy makes her feel. Tweaking and confirming formulation with Ms T Boundary and expectation setting.
3	Start Psychoeducation around CFS Discuss ways to give the client agency	Talking through CFS and normalising her symptoms Talking through expectation around managing symptoms
4	Continued Psychoeducation about CFS Diary check in Information about pacing (using pacing booklet)	Used Pacing booklet with Client Diary review comparison

	Information about current CFS treatments are available	
5	Management of condition Pacing – helping the client build skills to help them manage symptoms Goal setting Activity Planning Managing anxiety	Situation planning for when things don't go as planned
6	Closing and review Staying well plan for the future Goal review and set back planning Evaluation follow up Chalder's fatigue scale Fatigue Impact scale Brief Illness perception scale	Explanation that we will have a follow up session but that will be the last session. Review of each session and strategies to manage pacing and certain situations in the future including experiencing a setback. Pacing skills consolidated.
Follow up	Review with Client – review how the client has been feeling Chalder's fatigue scale Fatigue Impact scale Brief Illness perception scale	Client bringing up new issues and wanting the intervention to continue.

Ending the intervention

The ending of psychological intervention is highlighted as a crucial element of the intervention process. The end of psychological Intervention is a transition where the client and therapist no longer work together and go their separate ways (Gutheil, 1993). Managing client expectations regarding the length of the intervention and how and when it will end presented a challenge I had not anticipated; this is discussed further in the Reflective Report. When I conducted my initial assessment with Ms T, I explained that I would be delivering 6 sessions with a follow up 2 weeks after this. When we reached the end of each session I set boundaries for the remaining sessions and at the penultimate session I explained again that we would be ending the intervention the following week. I wanted to leave Ms T with a feeling of confidence and resilience to be able to manage ongoing issues. At the final session I ensured that I reviewed and consolidated Ms T's skills and knowledge acquired throughout the intervention, enabling her to use these strategies to better manage her condition.

Evaluation

I used a variety of methods to evaluate the effectiveness of the intervention. These included subjective measures such as using personal reflective practice and anecdotal feedback from the client. Objective measures included client completed questionnaires at baseline (prior to the 6 sessions) and following the last session. This provided me with a clear understanding of the client's progress and efficacy of the intervention.

As previously stated, I asked Ms T to complete the following questionnaires at baseline and following the final session:

Chalders' Fatigue Scale (Chalder et al., 1993)
Fatigue Impact scale (Vanage et al., 2003)
Brief Illness perception scale (Broadbent et al., 2006)

Ms T's scores did not change on the Chalder's Fatigue Scale or the Fatigue Impact scale, however she did score differently on the Illness Perception scale indicating she had slightly adjusted her perception during the intervention on questions relating to her understanding of the condition, control over the symptoms/condition and her perception of how much

treatment can impact on her condition. This was an achievement as it indicated that the psychoeducational element of the intervention had been effective. Pre and post intervention scores are outlined in *Table 3*.

Table 3. Baseline and Post Intervention scores on included measures

	Baseline Score	**Post Intervention Score**
Chalder Fatigue Scale* (Likert Scoring)	25	25
Fatigue Impact scale*	120	120
Brief Illness perception scale**	55	47

* Higher numbers indicate greater fatigue

** A higher score reflects a more threatening view of the illness.

Anecdotally Ms T reported that she felt the sessions were helpful and that she was now more aware of pacing and techniques as a method to manage her condition. She reported that she continues to struggle with resilience and low mood in addition to managing her fatigue symptoms. I suggested that following our sessions she continues to keep a diary and recommended accessing further support that specifically focuses on supporting those with conditions like ME and CFS.

Conclusion

Overall, the process of designing and delivering a 6 part intervention for a client was a positive process for both my development as a Health Psychologist and the wellbeing of the client. Ms T was receptive to the intervention and made good progress, reported anecdotally regarding her ability to pace and manage stressful situations. While her fatigue symptoms did not improve on the measures Ms T explained that she felt more able to manage changing circumstances and had more knowledge about her condition. The Covid-19 pandemic and the subsequent changes and uncertainty of this year has been a significant challenge for someone struggling to manage CFS, Ms T reported that the intervention enabled her to build resilience and feel more in control after a difficult and unusual year.

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3.2 Face-to-Face Case Study Reflective Report

Background

Throughout the course of the intervention with Ms T I continuously reflected on my ability to develop and deliver a psychological intervention for an individual. It was the element of the Professional Doctorate in Health Psychology that I was most apprehensive about as I was unfamiliar with the process, having never developed or delivered an intervention from start to finish before. The process of reflection is key to improving the quality of work undertaken (Bolton., 2014), I wanted to use reflective techniques to improve my practice. I predominantly used Gibb's reflective cycle to help me break down each element of designing and delivering the intervention asking key questions at certain intervals such as, 'what could I have done differently' (Gibbs. 1988).

Assessment and Formulation

Throughout the process of assessment and formulation I reflected on my progress and approach. I was pleased with my assessment of the client, I felt I asked appropriate questions and prompted for further information while trying to elicit a focus for the interventions. I also deployed the use of formal assessments that I used alongside my own investigation when formulating an intervention for Ms T. I was new to using the five areas model for formulation and if I were to deliver the intervention again I would spend more time formulating using this model and refer back to it more during delivery of the intervention to keep the client focused on the original situation that was being addressed.

Designing the Intervention

Learning about evidence based treatment for CFS was the starting point in structuring my intervention. I spent a lot of time researching the condition and available treatment which helped me to plan the psychoeducational elements of the intervention. I had limited knowledge of methods in CBT and was not qualified to deliver a graded exercise therapy intervention, as suggested by some of the literature (Whiting et al., 2001). Following a number of training sessions with a qualified CBT practitioner, who helped me to understand techniques for delivering interventions, I felt confident enough to start developing an intervention based on this methodology.

Delivering the Intervention

When I began designing the intervention I wrote down that I wanted the intervention to enable:
Ms T to have enough energy to do things she enjoys (gardening)
Ms T to pace and say no when she has reached her limit.

However, during delivery of the intervention I reflected that I had been assuming that these were the primary aims that Ms T would like to achieve, and that this assumption might be biasing my intervention rather than working on what Ms T wanted to get from the sessions. In future, I will ask the client to write down the primary aim of the intervention and continue to come back to this checking in with the client that this is the focus they would like to work on. Occasionally, I started to lack confidence midway through a session due to a conflict about the assumptions I'd made at the start. This lack of confidence meant that I initially struggled with the focus of the intervention at times. I found that making notes and being observed by another Psychologist helped me to understand where I was getting side-tracked, for example in one of my observations it was noted that I asked a very broad and general question at the end of one of the sessions that I had not been aware of this at the time. After this observational feedback I focused my approach and grew in confidence for the remaining sessions.

The skills needed to conduct the intervention were in part developed via learning from taught sessions on this module and discussions/supervision with other Psychologists or those experienced in delivering psychological intervention. Developing my skills in sitting comfortably with silence was a challenge and something that I continue to find difficult. I felt the need to sometimes fill silences that occurred during the sessions and have reflected that this is as aspect of my personality in general, not just occurring during psychological Intervention. I attempted to hold out on breaking the silences after a few sessions and the more I practiced the easier it became. Therapists have previously stated that they have learned how to effectively use silence in therapy sessions by observing Therapists in action, whether as a client themselves or during supervision (Ladany et al., 2004), this is an element of Psychological Intervention that I want to explore further and improve on in the future.

Relationship with the Client

At the beginning of this process I was aware that having a good relationship with the client was important for the intervention to have a successful impact (Weck et al., 2014). I built a good relationship with Ms T from the start of our sessions and included small talk and light humour at the beginning and end of our sessions. Understanding how to boundary myself in terms of time and content of the sessions became more difficult throughout the intervention. I reflected on why this was and concluded that as my relationship with Ms T strengthened, it was harder to refuse requests and keep boundaries in place. For example, Ms T. quite often wanted to move the topic away from what we had originally discussed just as we were coming to the end of a session. Regularly this blindsided me and I had to work hard to keep time boundaries in place and not to ask broad questions to open the conversation up to general conversation. Being observed helped me to notice when this was occurring and be more assertive in managing time and setting expectations in the sessions.

Observation

The process of being observed delivering an intervention was something I did not initially feel comfortable with. I reflected that I was nervous because I could not pre-empt what the client would say or how they would react during the session and therefore hoped that I would be able to think flexibly and dynamically during the observed session. This dynamic technique I took from Schon (1983) who describes 'thinking in action' and being reflexive throughout the process of delivering an intervention. This technique helped my observed session to run smoothly and allowed me to be mindful throughout with a focus on what the client was saying rather than preconceived ideas.

I was also apprehensive about recording the intervention on Microsoft Teams due to data security concerns. I discussed my concerns with my supervisor who reassured me on this point, and I found a secure solution to completing the observation and receiving feedback. Prior to my observational feedback on Ms T's session I received observational feedback on a session with a different client. This initial feedback was useful and similar issues around keeping boundaries and dependency arose during my sessions with Ms T that I was able to better address having reflected on my initial observer feedback.

Challenges

I conducted all sessions with Ms T online, via the platform Microsoft Teams, and while I was initially apprehensive about this approach, I found that there were some unexpected benefits to conducting sessions online rather than in person. As an example, online therapy provides more privacy, trying to conduct individual private sessions in a College environment is

difficult due to the lack of space and busy atmosphere. Aafjes-van Doorn et al., 2020 examined the experiences of 141 therapists who have transitioned to delivering online therapy during the pandemic and found mixed feelings toward delivering therapy online regarding the ability to foster real therapeutic relationships in a virtual setting, I reflected on this during my sessions with Ms T. In two of our sessions she became emotional when talking about her experiences, however it was hard to tell over the camera, due to internet delays and the absence of body language and which may have inhibited me from pre-empting her feelings or reacting in a timely way. I reflected that adjustments could be made to account for the lack of face to face contact, for example, taking longer than usual breaks before responding to ensure the correct message has been conveyed by the client.

Ending the Intervention was the primary challenge for me and something I was not initially able to complete effectively. Upon reflection I concluded this was because I felt uneasy about leaving some of Ms T's issues unresolved and felt we had run out of time. I have reflected that my purpose was not to resolve all of her issues, but to provide her with the knowledge, skills and personal agency to be able to tackle these issues for herself. I was aware towards the end of our penultimate and last sessions Ms T was bringing up a number of new issues which challenged me to stay focused on the issue in hand and the original scope of the intervention. I reflected that this was because a) I took too much of a broad rather than specific approach in some of our initial sessions when gathering information and b) Ms T wanted the sessions to continue as she felt she needed them. Ms T asked me to continue working with her on a number of other issues separately to this intervention and I have since held an assessment session with her to see if it would be appropriate to continue to deliver further psychological Intervention, however I have reflected that this may be due to my own inability to end the Intervention, something that I need further practice with and additional direction within supervision.

Table 1. Key learning points and future actions

Key Learning Points	**Future Action Points**
Keeping boundaries around time keeping for sessions and length of intervention	Putting in clear boundaries for the intervention including session length and length of the entire intervention and sticking rigorously to these boundaries, reviewing them at every session if necessary
Check assumptions of client-focused outcomes	Ask the client to write down the focus of the intervention and sign up to it. Continue to

	come back to this focus as often as is appropriate
Sitting comfortably with silence and allowing the client to guide the dialogue	Using strategies such as counting to 5 in my head prior to speaking and testing silences to see if the client has more to say before speaking
Ending the Intervention effectively and timely	Putting in clear boundaries about when the intervention will end and having a plan for what the client can do next and a review of what they have taken from the intervention
The barriers to delivering Psychological Intervention in a virtual environment.	When using virtual platforms to deliver the intervention take extra care to pause and wait for the client to finish and gauge their reaction before speaking, as there may be a delay or confusion in communication due to the virtual environment

Summary

Overall, the intervention for Ms T was partially successful, while her fatigue scores did not improve she reported improved outcomes in perceptions of CFS and how to manage her symptoms including pacing techniques. For me, as a trainee Health Psychologist, reflecting on the process of delivering the intervention with Ms T has sharply improved my learning in this field. Some key reflections from this piece of work (noted in *Table 1*.) have included gaining a better understanding how to more effectively boundary my time and provide clear expectations for clients at the start of the intervention. I will continue to work on keeping the sessions focused and specific rather than broad and general and need to work on strategies for effectively ending Interventions. I am generally pleased with my development during the planning and delivery of this individual intervention and have subsequently felt more confident and competent when conducting psychological intervention with further clients.

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3.3 Non Face-to-Face Case Study

A Group Intervention for Students in a Further Education College: Case study

Background

Maintaining the wellbeing of students in educational settings is incredibly important. Higher wellbeing scores in students in educational settings have been associated with greater levels of self-esteem, self-control, and motivation (Huebner, 1991). Improved wellbeing levels have also been associated with positive thinking, healthy behaviours, and improved physical health outcomes in students (Frisch, 2000).

Interventions designed to enhance student wellbeing are a fundamental aspect of the educational landscape, having significant implications for the overall development, mental and physical health of students (Upsher et al., 2022). Wellbeing interventions delivered in school, college or university settings have also been shown to enhance educational attainment in addition to resilience and experiences in education (Dix et al., 2020). These initiatives encompass a variety of approaches aimed at cultivating emotional resilience, social connectivity, and academic achievement (Weare & Nind, 2011). Interventions have previously included programmes that educate students on mental health (Kutcher et al., 2015), offered counselling services (DeAngelis, 2013), introduced mindfulness techniques (Zenner et al., 2014), and established peer support networks (Holt et al., 2017). By addressing the psychological and emotional needs of students, these interventions effectively alleviate stress, anxiety, and depression, thereby fostering an optimal learning environment (Stallman, 2010). Furthermore, they empower students with essential coping skills and emotional intelligence, equipping them to navigate the challenges of academic life and beyond (Greenberg et al., 2003). Investing in student wellbeing sets the stage for the cultivation of essential life skills, resilience, and adaptive coping strategies, all of which are invaluable attributes in the transition out of education (Huppert, 2009). Promoting student wellbeing not only enriches individual growth but also contributes to a healthier and more productive educational community (Suldo et al., 2014). Based on this literature my rationale was therefore to develop and deliver a wellbeing intervention for students at the Further Education College where I was undertaking my professional Doctorate placement. The context

being that students had just returned to College following a period of lockdown and uncertainty related to the Covid-19 Pandemic and were preparing to move into the world of work.

Throughout October-December 2021, I conducted a 6-session wellbeing intervention with a group of Traineeship students at a Further Education College. The aim of this was to improve wellbeing across the group, whilst focusing on key formulated areas. Wellbeing was the focus of the intervention as staff and students had highlighted this as a need following a difficult period of going in and out of a national lockdown as a result of the Covid-19 pandemic. The sessions were student led and designed based on an initial assessment of wellbeing needs. Sessions were carried out for one hour, every Wednesday afternoon, for six weeks.

Traineeships in further education offer the opportunity to gain work experience in a chosen sector while simultaneously improving employability skills, in addition to providing students with further English and Maths skills. It is typically a stage before an apprenticeship and provides fundamental skills for employment, it is the equivalent, academically, of attaining 5 GCSEs (A*-C) (UCAS, 2022).

Traineeship students were invited by the course leader to take part in the intervention. It was made clear that attendance was voluntary and that students could opt out of the sessions, if they wished. I provided the course leader with information about the proposed structure of the intervention, and we agreed a time for me to come and meet the students and provide them with a brief of who I was and the purpose of the intervention. This initial meeting with the group was useful for me as I was able to begin to build rapport and gather information for completing my assessment and formulation.

Assessment

Interventions should be tailored in accordance with an assessment of the needs of the target client base (NICE Guidelines, 2014). Assessment holds a pivotal role in understanding and enhancing the wellbeing of individuals when designing and delivering intervention. Health Psychologists utilise a range of assessment tools and

methodologies to understand the psychological factors impacting physical health and overall wellness (Ogden, 2019). This may include evaluating stress levels, health behaviours, coping mechanisms, and the impact of chronic illnesses on mental health. These assessments often involve surveys, interviews, and health-related questionnaires. Cultural competence, ethical considerations, and the integration of evidence-based approaches are integral in ensuring that assessments in Health Psychology are holistic and sensitive to the diverse needs of individuals seeking to optimise their wellbeing (Suls & Rothman, 2004).

To initially assess the selected students, the EPOCH Measure of Adolescent wellbeing (Kern et al., 2016) was used. This measure captures wellbeing scores across 5 domains: Engagement, Perseverance, Optimism, Connectedness, and Happiness. After assessing different wellbeing measures this one appeared to be the most appropriate for capturing a broad sense of wellbeing in adolescents and has been validated against other wellbeing tools to use for capturing wellbeing in student populations (Buerger et al., 2023).

Defining the specific wellbeing focus with the students was initially difficult, as there are numerous definitions and facets of wellbeing. As part of my approach, I asked the students to complete the EPOCH measure to get a sense of the domains they wanted to focus on but additionally to baseline the intervention. This was with the intention of measuring effectiveness across the students taking part. I used an initial session to ask the students what they would like to focus on and to understand what they might be struggling with regarding their general wellbeing. I also communicated regularly with the group's principal tutor who knew the group well and helped me understand how best to pitch the assessment and intervention (Moore et al., 2015).

Formulation

Formulation is a fundamental process for comprehending and addressing a rounded view of a client's need prior to designing and delivering the intervention (Johnstone & Dallos, 2013). It also provides a roadmap for interventions that address both psychological factors and physical health. While assessment focuses on gathering

data, formulation is the process of synthesising this information to create a comprehensive understanding of the client's or client group's psychological issues.

Following the assessment, I noted that there were several distinct areas individuals needed support with within the group, many of these were shared across the group. I collated and summarised the information I had gathered from EPOCH scores, feedback from students and information from their tutor into 3 collective points:

Students struggle to maintain healthy routines, relating to general wellbeing, with a particular focus on sleep, often influenced by external factors in particular stress and anxiety, internet use and diet.
Students expressed that they find it difficult to focus and concentrate on their college work and upcoming work placements without getting distracted.
Students felt they have low confidence and wanted to improve this before leaving the familiar setting of college.

I immediately noted that these factors highlighted the need for an intervention involving psychoeducation related to the importance of sleep, sleep hygiene and healthy routines. Training and skill development related to reducing procrastination and improving focus. Finally, motivational group work focused on improving confidence looking specifically at leaving the college and entering the workplace.

Designing and Planning

In designing the intervention, I took a systematic and client-centred approach. Following the formulation of intervention goals, considering the needs and circumstances of the group, I undertook the process of planning out the best practice intervention methodology for the client group. The intention was that the sessions would be led by the participants and focused on their specific needs. Students in the group suggested that they would like to work on general wellbeing to improve their focus, confidence, and wellbeing. Careful tailoring of the intervention for a group meant considering the assessment and formulation for the whole group rather than individual members, and planning an intervention based on what would suit the

whole, ensuring that no one was left behind (Qvortrup & Qvortrup, 2018). I wanted to ensure my intervention was evidence based and considered regular monitoring and reflection throughout so that I could make tweaks as we moved through the sessions.

Built into the intervention was the use of additional materials to support different elements of the intervention. For example, during the sessions (2 & 6) which focused on stress and anxiety, I used work sheets to aid psychoeducation. I also planned to use scenario-based examples which have been shown to assist understanding (Yarnell et al., 2007) so that the group could discuss different approaches to managing specific situations. I spent time designing these aspects of the sessions alongside the outline schedule for each session as shown in Table 1.

When designing and planning the intervention I drew from Abraham and Michie's Behaviour Change Taxonomy (Abraham & Michie, 2008) which is a collection of 93 grouped behaviour change techniques. These techniques helped to inform my intervention and provided structure to each session as the effectual 'core' of each intervention exercise (Table 1. Intervention Session Schedule). The techniques commonly used across the whole intervention included: goal setting, shaping knowledge (via psychoeducation), social support, self-belief, and prompts/cues provision (Michie et al., 2013).

Table 1. Intervention Session Schedule

Session	**Topics covered**	**Teaching tools**	**Theory (BCTs)**	**Targeted aspect from formulation**
One	Focused on rapport building and getting to know the group. Understanding what Traineeships are and discussing key hobbies and interests of the students.	Introduction slides	Psychoeducation, Cognitive Behavioural Therapy (CBT), Goal setting, Social Support.	Initial session targeting all aspects of formulation.

	The session also involved explaining the role of a Health Psychologist and how the sessions will be structured and run.			
Two	The aim of this session was to talk about why we have stress and anxiety, the evolutionary origins of stress and anxiety and why we experience thoughts, physical sensations and emotions that may lead us to act in a certain way. Only initially touched on this as a future session was planned that also covers stress (Session 6). A focus on stress, techniques to relieve stress and what stress is. I took the group through an exercise around finding balance and provided them some techniques to deal with stress when it arises.	Worksheets	CBT, Motivational interviewing, Psychoeducation.	Targeting stress and anxiety
Three	Focus on procrastination and focus – discussed examples of when we are not so focused and techniques to improve focus in these situations (e.g., putting phone alarm by the door to get them out of	Case Studies	CBT, Scenario based learning, Prompts/Cues, Social Support.	Targeting procrastination and focus

	bed). Prompts to remind yourself. Making lists and recognising and acknowledging completing small tasks. The session will also use positive reinforcement that will focus on feeling good about things they have done, helping a friend/making each other laugh. Completing work/ playing football/ climbing/ cooking. Acknowledging these achievements is linked to improving confidence.			
Four	Focused on how to improve sleep, testing general knowledge, and providing psychoeducation around sleep hygiene, awareness about what 'healthy sleep' really means. Talking through what makes an individual have a good and a bad night sleep, including NHS tips for a good night's sleep.	NHS Sleep resources	Psychoeducation, Goal setting.	Targeting sleep behaviours
Five	Session 5 – Confidence and Connection. This session aimed to examine making connections with others. How we navigate	Case studies	Scenario/problem-based learning, Psychoeducation Social Support,	Targeting improving confidence when leaving college

	relationships and knowing what behaviours to avoid. Highlighting the benefit of human connection and why it is important to have connection with others for our own wellbeing. Using scenario-based activities.			
Six	Session 6 – Focused on a review of stress and anxiety. I reiterated strategies to manage stress and anxiety when it arises and how to reduce the risk of becoming stressed and anxious using preventative methods. Closing the Intervention - Summary of all sessions and final feedback and evaluation of the intervention.	Worksheets EPOCH evaluation	Goal setting, Self-belief – Mental rehearsal of successful performance	Tying all aspects together 1. Stress and anxiety reduction 2. Sleep and health behaviours 2. Targeting procrastination 3. Targeting improving confidence

Delivery

The actual delivery of sessions followed the layout as detailed in Table 1. There were occasional deviations where students wanted to discuss a specific point for longer than I had anticipated or took us away from the plan entirely. Each session lasted approximately one hour and included a break. Sessions were this length because this was the time allocated by the Traineeship course leader and enabled me to structure the sessions effectively with time for discussion with the students. Students were encouraged to move around the room and take a break if needed for their own comfort.

Attendance for the group was consistent for most of the students. I was made aware of absences by the course lead and all absences across the sessions were due to Covid-19 related illness. Three members of the group joined the sessions halfway through (session 4) due to starting their Traineeships late. I discussed this with the course leader and decided that it was appropriate for them to join the remaining three sessions.

Table 2: Intervention Attendance Record

Client	Attendance S1	Attendance S2	Attendance S3	Attendance S4	Attendance S5	Attendance S6
C1	✓	✓	✓	✓	✓	✓
C2	✓	✓	✓	✓	✓	✓
C3	✓	✓	✓		✓	✓
C4				✓	✓	✓
C5				✓	✓	✓
C6				✓		✓

C = Client/Student, S = Session

Challenges to delivery

The intervention was delivered predominantly as formulated and ran for six sessions this number of sessions was chosen as NICE recommends up to 8 sessions for group (NICE, 2022), it was not possible to do 8 sessions with this group and six sessions led me up to the end of the academic term. Most sessions ran smoothly, however, there were several practical elements that I was not aware of prior to starting the intervention. The classroom available was quite small and stuffy which did not allow for students to sit in a group circle and there were computers along each side of the room, which often provided distraction to the students. The temperature in the room was also sometimes difficult to regulate, making it either too cold or too warm. Using the AV equipment was an initial challenge and took some time at the start of each session to set up. These delivery challenges took some time to get used to but were overcome and became easier with each session.

It is important to note that this intervention was delivered during the Covid-19 pandemic following a return to college after several lockdowns. This may have impacted on the attendance and the general productivity and concentration of the students to partake in the sessions.

Evaluation

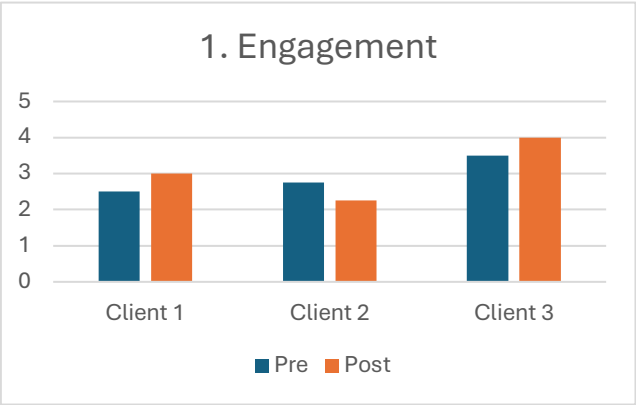
NICE guidelines state that the impact and process of the intervention should be evaluated (NICE, 2022). Evaluation of an intervention can help to inform future iterations and improvements to the intervention, improving both process and impact (Moore et al., 2015). Scores from the EPOCH evaluation are shown in Table 3. It was not possible to get scores for the whole group due to absence and students starting the intervention part way through, however I managed to collect pre- and post-scores for the three original students who began and completed the intervention, attending all sessions.

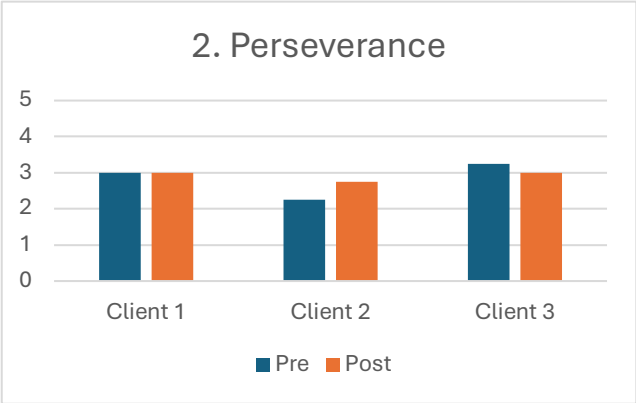
Table 3. Pre- and Post-intervention scores on the EPOCH adolescent wellbeing scale

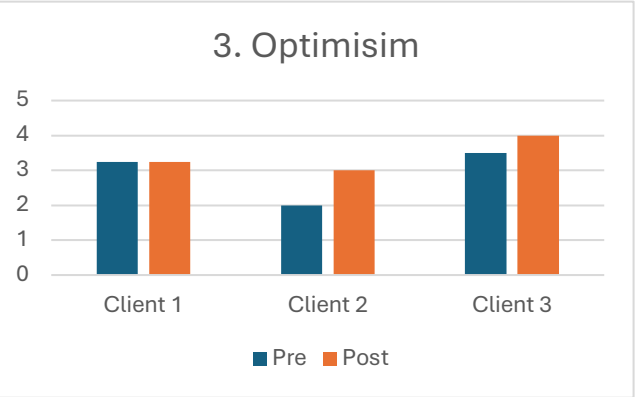
	Engagement			**Perseverance**			**Optimism**			**Connectedness**			**Happiness**		
Time	*Pre*	*Post*	*Change*	*Pre*	*Post*	*Change*	*Pre*	*Post*	*Change*	*Pre*	*Post*	*Change*	*Pre*	*Post*	*Change*
Client 1	2.5	3	+	3	3	/	3.25	3.25	/	5	5	/	4.5	5	+
Client 2	2.75	2.25	-	2.25	2.75	+	2	3	+	4.5	4.5	/	2.75	3	+
Client 3	3.5	4	+	3.25	3	-	3.5	4	+	4	4	/	2.5	2.5	/

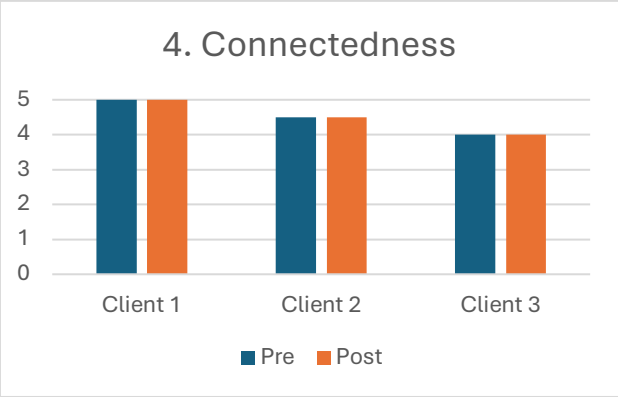
/ = no change + = positive change - = negative change

Graphs 1-5. Pre and post intervention scores on each measure of the EPOCH scale









Following examination of the pre- and post-intervention scores, it was evident that the wellbeing intervention had a small to moderate effect on the scores on the EPOCH evaluation scale, seven positive effects, six no impact and two negative effects (Table 3). Many scores remained the same, improving marginally for some students in some respects, for example ‘Happiness’ and ‘Optimism’. I was encouraged to see that these scores went up following the intervention. Students also reported anecdotally that they had really enjoyed taking part in the intervention and that they understood more about healthy sleep patterns and had improved confidence going into their new workplaces. In future, if conducting this intervention again I would incorporate strategies for gathering qualitative feedback from students.

Conclusion

Overall, I believe the intervention was partially successful. Following examination of the qualitative and quantitative feedback I feel had a positive impact on the small Traineeship group and that dynamics improved week by week between myself and the group. Improved scores on the EPOCH measure and anecdotal feedback from the students and course leader improved my confidence in delivering interventions as an independent practitioner. I very much enjoyed delivering this group intervention and working with a student group, face to face. I look forward to running more therapeutic interventions in a group setting and building on this skill set in the future.

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3.4 Non Face-to-Face Reflective Report

Delivering this intervention to the Traineeship group was a journey of growth and learning for me. In this report, I detail my reflections following delivery of the intervention. To aid my reflective practice I predominantly used Gibbs reflective model (Gibbs, 1988).

When beginning the Psychological Interventions competency, I did not feel very competent or confident. Having only worked briefly in clinical settings prior to starting the Doctorate, I did not feel I had the therapeutic skills to enable me to plan and deliver a successful intervention. I had, however, already completed my face-to-face individual intervention and had undertaken the Psychological Interventions competency module at this stage, so had equipped myself with some knowledge and skills prior to delivering an intervention to a group.

I asked for and received a lot of support from colleagues at the College, my Doctorate peers, and teaching staff at the University while undertaking this competency. The college was supportive in helping me to find a group of students who would benefit from a wellbeing intervention and would be available in a free period weekly. The Traineeship students were an ideal group as they were in a transition period in which they were finding employment outside of college and this was a daunting prospect for many of them. They were also a small group that were already well established and appeared to be comfortable with each other, supporting each other and generally getting on well throughout the sessions. This made delivering the intervention easier as they were not afraid to interact, challenge or speak with each other in a friendly and supportive way.

In the initial sessions, I think I was quite nervous about communicating why I was there and the purpose of the intervention. I reflected that this was because I was worried that the group would not be interested or feel that there was not a need for my intervention. I was pleasantly surprised when they were immediately very engaged in the conversation about wellbeing, and it quickly became apparent that

they would welcome Health Psychology input to improve their health and wellbeing in and outside of college.

Distraction amongst the group in general was a barrier to delivery and I found that the room I held the intervention in was not always conducive to the group's engagement and concentration. Hoddinott et al (2010) discusses how the environment and setting can determine the success of an intervention. The classroom was often very warm and as my session was held in the afternoon after lunch, it was clear that at times students were tired and sleepy. There were computers on each side of the room which the students sat next to and often switched on throughout the sessions to look something up as we were discussing.

Throughout the sessions the discussion quite often went off topic and I had to steer the discussion back to the focus of the intervention. I did not mind these interruptions as they often helped the group reiterate something we were discussing or built humour into the sessions. However, sometimes I felt frustrated and had to be creative and use different strategies to get the group back on track. To keep the group engaged I often used videos or scenario-based helping to open-up the discussion. This method encouraged the group to express themselves, and I quickly realised they were more engaged when they had an opportunity to speak and express themselves, rather than just listening to me.

Another initial challenge was the diverse range of student needs and learning styles. Some students responded well in the group setting, while others required one to one attention. This necessitated the ability to customise the intervention to meet individual needs effectively. The dynamic of the group was very friendly and open. Some students were more talkative and extroverted and were keen to talk throughout the sessions while others were quieter and did not want to contribute so much. I ensured that throughout each exercise, and aspects of the intervention, that everyone was given an opportunity to contribute but did not want to put pressure on any of the quieter students who may not have felt as comfortable speaking up. To assist with this, I sometimes used worksheets where students could write their ideas and contributions down without having to say them out loud.

One of the key lessons I took away during the delivery phase was the significance of ongoing assessment and adjustment. Regular check-ins were essential to monitor the effectiveness of the intervention and make necessary modifications. This helped in ensuring that the intervention remained relevant and impactful throughout its duration. Throughout, I often used ‘reflection in action’ (Schon 1983) which allowed me to adapt and change to meet the group’s needs. The group was academically diverse and at times required me to use simple language and provide further detail to explain more complex ideas. The three original members of the group had clearly formed a good friendship and were very engaged with the intervention at all stages, despite being individually quite different. It was more difficult when a further three students joined the group (in session 4) as there was some disruption to the flow and I found I needed to work harder to keep the students engaged as a group as the additional students were more easily distracted in a now larger group.

As the sessions went on, I found myself genuinely enjoying my time with the group having established good rapport with them. Positive therapeutic relationships have proven to be a good predictor of positive outcome in interventions (Goldsmith et al 2015). I reflected that this positive relationship was helping me to deliver the intervention more confidently. It was clear the group needed to feel safe to open-up about their struggles with wellbeing. Patience and active listening, as well as the ability to adapt my approach to each student's unique needs helped to create a safe and trusting environment. An introduction from the group tutor also helped to establish this.

Another crucial aspect of the planning phase was selecting appropriate strategies and resources. I decided to combine worksheets, booklets, PowerPoint presentations, videos, all tied together by flexible group discussion to cater to diverse learning preferences. Additionally, I needed to create a supportive and non-judgmental environment to encourage participation and engagement (Jakobsen & Overgaard, 2018). Closing the intervention in my final session was a challenge, this happened leading up to the Christmas break and students were particularly energetic in the final session, they began to bring up further aspects of wellbeing that they wanted to discuss which was a challenge as we did not have enough time to open a new discussion, and this made me feel guilty that I had not covered

everything fully. I reflected that in future I would like to build more time into the intervention to open the discussion to final thoughts as a way to close the intervention. While we had reflected on what we had covered in the actual intervention there was no time to discuss anything else in this final session. Despite the challenges, delivering the intervention to students yielded several positive outcomes. The students in the group began to support and motivate each other, creating a more inclusive and collaborative learning environment. The intervention also served as a platform for students to share their experiences and challenges, reducing the stigma surrounding wellbeing challenges and difficulties.

My experience of delivering this intervention to Traineeship students has provided valuable insight into the process of supporting their wellbeing. My key reflections following the intervention is that in this environment flexibility is key; Tailoring the intervention to individual needs and learning styles is essential for its success; One approach may not work for all students; and being adaptable is crucial. I reflected on the importance of the use of patience and persuasion, students may resist change initially or encounter distractions, and patience and evidence-based persuasion are essential in helping them embrace new approaches. Establishing trust and a sense of community and support was crucial to the success of this intervention enabling students to open-up and engage in the sessions. Finally, I reflected on my use of ongoing assessment and recognised that this is a vital part of the intervention. This ensures that adjustments may be necessary while the intervention is ongoing.

In conclusion, delivering an intervention to this student group has been a dynamic and rewarding journey that demanded careful planning, adaptability, and a commitment to fostering their growth and wellbeing as part of the intervention. By addressing their unique needs, building trust, and continuously assessing and adjusting the intervention through ‘reflection in action’, I hope I have helped them to develop essential life skills that will serve them beyond their educational journey. This experience has not only improved the wellbeing of the students but also deepened my understanding of the importance of student support in the educational context.

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Chapter 4. Teaching in Health Psychology

4.1 Teaching Competency: Case Study

Background and Programme structure

This case study describes the process of planning and delivering five teaching sessions to a variety of learners, including a group of health professionals. The theme of this teaching programme focused on Technology Enhanced Healthcare (TEH) related to the Health Psychology profession and were delivered to the following audiences:
Digital Healthcare Scientist Practitioner Apprentices from the X University and X NHS Trust; Health and Social Care students from the FE College (x2 groups); third year Psychology University students from University of Staffordshire; and Health Professionals who were also Doctoral student peers. The opportunities to deliver this programme were identified through my Professional Doctorate placement, my role with the Innovation Organisation and links with Staffordshire University lecturers. The audience size ranged from 2 to 27.

My Professional Doctorate placement is based at a FE College, a Further Education institution that delivers a range of courses from Health and Social Care to Hairdressing, Dance and Music. As part of my role, I have received coaching and mentoring from experienced educators, been supported to deliver a number of teaching sessions and encouraged to contribute to the college's enrichment timetable. This has allowed me to gather feedback from staff and students regarding my own teaching experiences. In addition to my placement at the FE College, I am employed by an NHS Innovation organisation a Research and Development team that focuses on digital health innovation. My role involves supporting the implementation of emerging digital health technologies into healthcare. Much of this technology is aimed at improving patient wellbeing and helping clinicians to more efficiently and safely deliver clinical services. As I began my Professional Doctorate in Health Psychology, I quickly recognised that I was utilising Health Psychology theory from my MSc and Doctorate to influence and adapt the behaviour of patients and clinicians using technology as the vehicle to do so. My expertise and experience in this area informed the focus of this teaching programme. Further details of all teaching sessions delivered are provided in *Table. 1.*

Table 1. Summary of Teaching Session Clients

Student Group	**Number of students**	**Title of session**	**Format**
Digital Healthcare Scientist Apprentices, X University	10	Technology Enhanced Healthcare	2-hour face to face lecture
Health and Social Care students Level 1*, College	8	The role of a Health Psychologist + Technology Enhanced Healthcare	1-hour face to face lesson
Health and Social Care students Level 3**, College	15	The role of a Health Psychologist + Technology Enhanced Healthcare	1-hour face to face lesson
3rd Year Psychology Students Staffordshire University	27	Technology Enhanced Healthcare	2-hour face to face lecture
Professional Doctorate Students, Staffordshire University	2	Technology Enhanced Healthcare	Microsoft teams video conference (1.5hours)

∗BTEC Level 1 Introductory Certificate Health and Social Care

∗∗BTEC Level 3 Extended Diploma in Health & Social Care (Health Studies)

Assessment of Training Needs

Learner Motivation

The approach I took prior to delivering the teaching sessions was first to assess and identify the training needs of each individual group of learners and began by considering student motivations. Race and Brown (1998) suggest that learner motivation plays a key role in shaping the overall learning experience for learners and therefore it is crucial to understand the motivations of student groups prior to formulating the teaching materials. To do this, I spoke with the course leads for each of the student groups and discovered that motivation to learn varied by group and even within the groups. Motivation in adult learners can derive from a variety of external and internal sources including increased self-esteem, recognition and a sense of improved self-efficacy (Wolfgang and Dowling, 1981). At College it was suggested that I keep the content of my session simple for the level 1 group as they were brand new to the subject of health and social care and while they were interested in the topic of Psychology, they knew little about Health Psychology. For some, their motivation to learn was focused around passing the course and receiving the BTEC qualification. I therefore adapted this session to be more accessible to students with less experience and knowledge, starting with an explanation of the role of the Health Psychologist and scene setting the work a Health Psychologist might conduct. Finally adding in the potential of technology to impact on Healthcare practice.

Learning Styles

In addition to learner motivation I also considered different learning styles before embarking on the teaching sessions. While planning each session I again coordinated with the course leaders to gather insight into the academic level of the learners, their prior knowledge and expected outcomes from the session, in addition to their learning styles. Honey and Mumford (1992) categorised four general learning styles: activists; reflectors; pragmatists; and theorists. These four styles vary in how they optimise understanding of a subject or experience, for example, activists learn through experiencing something directly, theorists prefer to hypothesise and examine an experience, pragmatists learn by linking the experience directly to their role and reflectors, as the nomenclature suggests, reflect deeply on an experience to be able to process it. Other learning style theories have suggested alternative categorisation such as visual, auditory or kinaesthetic approaches to learning (Coffield et al, 2004).

There is evidence to suggest that it is necessary for educators to take learning style into account when delivering teaching, otherwise learners may not be able to fully participate in the session or meet their learning potential (Robotham., 1999; Pashler et al., 2008). While learning styles have been suggested to provide improved learning achievement (Sternberg.,

Grigorenko & Zhang., 2008), some have disputed this paradigm, arguing that the learning style theory contains a number of problems including, lack of a solid explanatory framework and poor reliability and validity across studies (Husmann & O'Loughlin, 2018; Knoll et al, 2017; Rogowsky, Calhoun, & Tallal, 2015, Krätzig & Arbuthnott, 2006). Furthermore, An and Carr (2017) argue that rather than adapting teaching materials to these broad learning styles educators should attempt to understand student performance based on sensory elements such as student temperament, level of expertise and perfectionism. As I began planning my first sessions, I reflected on the 'learning style myth' (Nancekivell et al., 2019), and these alternative 'sensory' factors for each group and made sure to assess the level of expertise prior to the sessions. Based on my assessment of this academic debate, I concluded that to provide students with the best chance of understanding and engaging with the content of my teaching I would account for the diversity of learning styles. This meant providing tasks with an active element, reviewing materials at points throughout the session, encouraging reflection and linking topics back to a role each group may be familiar with (e.g. Health and Social Care/Psychologists/Digital health care scientists).

Group Variation

There were several differences between the groups I delivered training to, particularly in relation to level of prior education and knowledge of general psychology and technology. The students at the College were between the ages of 16-18 and were studying BTEC diplomas in health and social care (Level 1 & Level 3). I spoke with their tutor who had asked me to deliver the sessions, she told me that the first group (Level 1) were quite nervous and would not engage much and I should not expect much interaction. She advised that it would be appropriate to keep the content of my teaching session as simple and uncomplicated as possible to avoid confusion. She was accurate in her description of the class, as initially, they were very quiet and did not want to engage with the session, however one or two students did ask questions and contributed to the session when I started using longer pauses between questions, a technique I used for reflection throughout all my teaching sessions as I grew in confidence (Ryan, 2012).

My first and last learner groups consisted of health professionals actively working in NHS clinical environments. It is important that health professionals are continuously learning as it has been shown to have a positive impact in relation to the individual and associated patient outcomes (Morrison, 2003). The current 10 year forward plan (www.longtermplan.nhs.uk) places emphasis on the use of technology in healthcare, I therefore felt that my chosen topic would be very pertinent to those currently working in patient-facing settings. Hall (2011)

suggests that using debates as an educational strategy for health professionals can develop critical thinking skills that are essential to managing a complex clinical environment. For example, I attempted to use a task that incorporated an element of debate into my first teaching session by getting students to think up digital solutions to different health-based scenarios and then challenge each other and discuss their chosen solution.

Identification of structure and content

Learning outcomes

D'Andrea (2003) suggests using an outcomes-based pedagogic design to improve conscious and purposeful teaching. It has been recommended that the key to success involves devising a teaching plan which is focused on learning outcomes and requires prior assessment of student's learning characteristics before constructing activities that will guide students to these outcomes (Reynolds & Kearns, 2017). I used this theory as my starting point, reflecting on what I thought learners should know about TEH, noting elements that would be useful to their individual roles and suit the characteristics of each learner group. The learning outcomes are further broken down as demonstrated in *Table 2.*

Table 2. Structure and content of Learning outcomes

Learning Outcome	**Related Content**	**Resources and delivery**
Be able to explain what Technology Enhanced Healthcare is	Examples of how technology is used in a healthcare setting.	Interactive quiz – a demonstration of technology currently available in health and social care settings.
Be aware of what emerging technology is currently available within the health and care sector	Demonstration of new health related technology (Artificial Intelligence, machine and deep learning algorithms, virtual consultation software, medical devices and self-management and	Interactive quiz – examining whether technology from Sci-fi movies currently exists within the health and care sector.

	monitoring applications) explaining the 'current' state vs. the 'future' state of healthcare	TED talk – Daniel Kraft, 'Medicines Future: There's an app for that'
To understand and be able to explain the benefits and barriers of implementing digital technology in health and care systems	Exploration of the benefits of using technology to enhance healthcare. A description of why it is difficult for the NHS to innovate and implement new technology despite the evidence base and clear benefit to patient care Description of the systemic and societal issues that can act as a barrier to the uptake of technology (e.g. data security issues or digital literacy).	Open ended questions asking students to speculate about the potential benefits and barriers of TEH from their current knowledge base. A description of real-world examples of technology being used to improve patient care and clinician's practice. A slide with a number of real-world examples of barriers that may prevent the implementation of technology.
To be able to align Health Psychology theory with Technology Enhanced healthcare	A demonstration of how Health Psychology theory can support the efficiency and uptake of digital technology. How technology can support Behaviour Change interventions to be delivered	A review study that examines the development of apps and the use of Behaviour Change Techniques leading to more effective behaviour change potential by using healthcare apps.

Session structure and content

As I constructed each training session, to identify content and structure I used Bloom's Taxonomy of learning to further develop the learning outcomes for each group, deciding whether to utilise 'low level' or 'high-level thinking skills' (Bloom, 1956). For the less experienced students at the college I included the introduction of 'knowledge',

‘comprehension’ and ‘application’ to construct learning outcomes ensuring that they would have a good foundation of understanding before exploring the topics of Technology and Health Psychology further. As an example, I provided them with information about technology and some of the benefits and barriers based on real world health and social care based examples. For learners at University level (X University and Staffordshire University) I developed an ‘apply’, ‘analyse’ and ‘evaluate’ approach. I aimed to encourage deeper learning and supported students to understand how technology could impact their own practice as health professionals or how technology will be used to systemically change the delivery of healthcare from a reactive model to a preventative one. In this second approach I asked students to think critically about how technology could impact on patients and clinician’s lives, both positively and negatively.

Bligh (1998) proposes that deep learning can be achieved through a combination of a strong lesson plan and an enthusiastic teacher. I wanted to ensure that I had both a solid understanding of my subject, in addition to a genuine passion and enthusiasm for the topic of TEH. Technology is a topic that has not always been at the forefront of my field of interest and I would not describe myself as particularly technical, however, the way the landscape of healthcare delivery is changing and human behaviour change in relation to technological advances is something that interests me greatly. I therefore attempted to include some detail about new technology and the infrastructure implications of implementing digital devices and concepts into each of my sessions. However, in all sessions, predominantly I focused on the impact of technology for clinicians and patients, concentrating on patient and clinician behaviour change, and the benefits and barriers to the implementation of new technology into the health and care system.

Selecting Materials and Teaching Methods

Methods of delivery

As the topic of my teaching sessions was focused on technology, I decided that this should be reflected in the method of delivery. Interactive technology has been shown to be an effective teaching tool in higher education (Renes & Strange., 2011). I explored the idea of using interactive quizzes such as Menti (www.mentimeter.com) and Kahootz (www.kahootz.com) as part of my presentation and was successful in doing so in one of my quizzes at . As the other groups I took at College and the X University were quite small, I did not feel the need to use these quiz programmes. The quiz I ran at Staffordshire University was informal and just for the purpose of initially engaging students in the topic of TEH.

I delivered the first four sessions in a face to face forum using a PowerPoint presentation as a guide and information source. I attempted to make the slides as interactive as possible with the use of embedded videos, quizzes, moving images and interactive questions throughout. My final session was also originally planned to be delivered face to face, however, due to the Covid-19 Pandemic large group meetings were not permitted by the Government and the College and University were both forced to close for face to face teaching. I therefore adapted my approach and delivered my final session online, using Microsoft Teams (www.microsoft.com). For this session I made sure that I modified my learning materials to make them suitable for online learning. For example, some of the group activities that I had previously included had to be altered and adapted for working online, as I would not be able to see the learners or interact with them the way I would in a face to face setting. I used the interactive screen share function on Microsoft Teams and talked learners through the process of designing a digitally-based behaviour change intervention rather than leaving them to work in groups.

The majority of my teaching sessions lasted over an hour (See Table 1.). I considered when I would need to provide learners with a comfort break as there is evidence regarding the importance of breaks to realign focus during teaching (Ariga & Lleras., 2011). I ensured that approximately half way through each of my sessions, learners had a break and encouraged them to get up and stretch their legs as it has been suggested that physical activity can improve productivity in learners (Watson et al., 2017).

Selecting Learning Materials

Prior to my sessions I deliberated about whether to provide learning materials to the students in advance of the teaching session (i.e. access to the PowerPoint slides) as Einstein et al., (1985) promotes the use of handouts prior to the taught session. There has been conflicting evidence that providing materials at the beginning of the session may not enable students to have deeper discussions about areas of interest and rather urges the teacher to cover every element included in the prior materials (Williams & Eggert., 2002). I decided in the end not to disseminate materials and instead test the knowledge and understanding of the students during the sessions and encourage them to explore the concept of TEH based on some of their own personal experiences.

Before creating my learning materials, I reviewed Farrow's five basic principles for producing materials to promote effective learning (Farrow, 2003). These principles and examples of how I addressed them are shown in *Table 3.*

Table 3. Farrow's Five Basic Principles for producing learning materials and examples

Farrow's Principle	**Example of how this was addressed**
Learning materials should have a direct link with the verbal content of the lecture	I made reference to my PowerPoint slides throughout and talked through examples that related to the content of my slides.
Learning materials should be easy to read	I created my slides so that they included light text on a darker background and a bold font as this has shown to be useful for students with dyslexia and learning difficulties (Pollack, 2012).
Learning materials should be consistent in style throughout	I used a consistent font and presentation style across all of my PowerPoint slides
Learning materials should emphasise important phrases using highlighting	I made sure to highlight key phases and words related to the learning outcomes and aims of the session
Learning materials should target the focus to learning needs.	Further Education College Students Information provided about potential career routes into Psychology Information and knowledge about new technology University Students Scenario based application of technology into healthcare across a range of settings Healthcare Professionals Patient centred information Information on NHS national requirement for the use of technology in healthcare

College classrooms are set up with a screen and projector, I found the projector screen was difficult to read without the lights completely off which was not ideal for student engagement. In my first session at the college one student had a hearing impairment and used a hearing device that I wore around my neck while delivering the session. Accessibility for students with hearing or sight impairment was not something that I had previously considered, and I reflected on this, making sure that in future sessions I made my slides as inclusive as possible, keeping in mind the needs of any students that were not able to access the course materials. I considered the level of each group while formulating the sessions, I used short statements and simple language where possible to improve understanding across all groups. I also used a number of pictures and diagrams to break up the text and emphasise key messages (Farrow, 2003).

Assessment of Learning Outcomes

Prior to undertaking each session, I attempted to gauge how students on each course were being formally assessed as the evidence suggests that assessment can have more influence over a learner's achievement than any other factor in teaching (Race., 2007). I liaised with the course lead for each group to ensure that I was aware of what the students would be assessed on following the session or at the end of the course, knowing this would impact on their motivations to learn. The type of assessment varied by group, the Digital Healthcare Scientist apprentices were currently working toward an apprenticeship degree as a Digital Healthcare Scientist Practitioner. They would be assessed via coursework and their ability to meet certain competencies, linking digital technology to healthcare, in a variety of healthcare settings. The learners at the college were also required to complete coursework related to health and wellbeing which involved creating leaflets containing health information and messages to change health behaviours related to smoking, sugary drink consumption and sexual health. The undergraduate students at Staffordshire University would be graded on their ability to complete a scenario-based assessment examining psychological theory in relation to health behaviours. The Staffordshire University course had included information on behaviour change models of health and health literacy and I liaised with the module lead who provided me with the opportunity to help shape the assessment. I found this process extremely useful and prior to delivery of this session reflected deeply on my learning outcomes after contributing to some of the assessment materials.

I also considered formative assessment by including quizzes and questions throughout my teaching sessions. This formative assessment provided me with insight about the learners understanding and additionally helped to shape current (live) and future sessions.

Summary

Overall, planning and delivering these teaching sessions has been a valuable experience and has well-equipped me for delivering teaching sessions in the future. Addressing the variation between my teaching groups has demonstrated the importance of adapting my approach and session materials to meet the learning needs, motivations, learning styles and level of expertise of the learners. Although not always possible I endeavoured to plan for different scenarios while using strategies to manage engagement and individual differences between learners. My confidence has increased as a result in addition to a noticeable improvement of my ability to think quickly and manage challenging situations whilst delivering teaching.

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4.2 Teaching Competency Case Study Evaluation and Reflective Commentary

Professional Doctorate in Health Psychology

Teaching Competency: Evaluation and Reflective Commentary

Background

This evaluation and reflective commentary describe the process of evaluating my teaching sessions and how the feedback I received influenced my approach to subsequent teaching sessions. Additionally included, is a personal reflective commentary of the process of planning, delivering and evaluating a teaching programme involving five teaching sessions, on the broad theme of 'Technology Enhanced Healthcare (TEH)' to students and Healthcare professionals as a Trainee Health Psychologist.

Sources of Evaluation

Wilkes and Bligh (1999) emphasise the importance of evaluating teaching programmes for the teacher and demonstrated that it is an effective tool to improve understanding of learning outcomes for learners. Conducting evaluation across my teaching sessions enabled me to continuously reflect upon and improve the content and delivery of my teaching. For each session in my teaching programme, I collected both formal, informal, summative and formative feedback from learners regarding teaching style, quality and content of the sessions allowing me to adapt my materials and my delivery style for the following sessions. I collected feedback from a number of sources, including feedback forms and online surveys, in addition to student testimony and input from the college and University tutors. I ensured that I reflected before and after each teaching session and found that this process of self-reflection was a valuable form of evaluation, used to improve my teaching practice.

The formal feedback I collected from College was predominantly positive and implied that students had enjoyed the teaching session. Some learners reported that following the

session they did not have a better understanding of Health Psychology than they had previously, indicating that parts of my session had been ineffective at describing the role of a Health Psychologist clearly. This feedback helped me to structure my approach for the next session, adding more detail and practical examples to explain the role of a Health Psychologist and how Psychologists might use Technology Enhanced Healthcare (TEH) in their practice. I changed tact in subsequent sessions and used practical scenario-based activities and examples of working with clients, demonstrating how Psychology and Technology can interact to improve healthcare delivery, setting a task for students to come up with a digital solution to address a patient's problem.

In addition to the formal evaluation, disseminated at the end of each session, I wanted to monitor whether my sessions were interactive and that learners were keeping pace and understanding the learning material. I therefore informally assessed the learner's knowledge and understanding by asking questions throughout. For example, following explanations of use cases of digital technology in healthcare, I asked students; 'What do you think the benefits of technology are in health care?', 'What do you think the barriers of introducing technology into healthcare might be?'. In the smaller groups there was initially very little participation from learners, however in the University settings there was better engagement where learners suggested sensible and insightful benefits and barriers to using Technology in healthcare settings. I made sure to give appropriate praise to the learners who suggested solutions and attempted each time to start an informal conversation or debate to enable deeper learning and further involvement of students (Doody & Condon 2012).

Having reflected, I could have been more consistent when collecting feedback across all of my teaching sessions. I switched between paper based and online feedback surveys and adapted questions based on the groups I was teaching. I felt retrospectively that this approach had not enabled consistent feedback across all sessions. The purpose of using a mixed approach to collecting feedback was to adapt to each session that was slightly different to the last and evolved as I took each session and therefore the questions changed throughout. However, in future, while I would still tailor the content of the feedback form to each individual group I will make the questions slightly more consistent so that some analysis may be possible. Initially, I believed I would receive a better response from sending out an online survey, via Survey Monkey (www.surveymonkey.com) as a virtual approach has been considered more streamline than traditional paper surveys (Wissmann et al., 2012). I thought that this approach would be simpler when I came to analysing and writing up the feedback, however, due to a poor response rate from learners, in future I will collect feedback manually (on paper) at the end of the session to avoid lack of response.

At the College, the normal class teacher observed my teaching session and provided me with informal feedback. The teachers I liaised with at the college all have a great deal of experience teaching in a further education setting and I found it useful to observe their approach to managing their classes and pitching the materials at the right level. I was able to observe several teaching sessions and group tutorials prior to delivering my sessions and this helped me to pitch my session to the age group and level of expertise of the learners at the college. Again, at the X University, the course lead sat in on my session and observed, he also provided me with informal feedback which I found useful. Across all of the groups I made sure I personally observed learner behaviour and engagement and attempted to be mindful and aware of how the learners were acting in the sessions, this gave me an initial idea of the general engagement of students.

Successes

As a method to improve each session of teaching I reflected on what went well so that I was able to maximise effectiveness of future sessions. Despite some of the limitations of my formal feedback I collected some excellent informal feedback, particularly from staff and students at the college. Following the second teaching session for Health and Social Care Level 3 students, I received an email from one of the tutors who sat in on the session. She informed me that one of her students had been very engaged and inspired by my lesson and was thinking more about a career in Psychology. This feedback significantly increased my confidence when delivering the sessions at the College and I reflected on what had gone well in this session rather than solely focusing on the shortcomings, for example, I had engaged the room much more effectively by asking the students questions at intervals throughout that particular session.

Prior to beginning the teaching competency, I felt apprehensive about delivering, what I considered to be, long sessions to learners on the topic of TEH. For my first session I was asked to deliver teaching at the X University. I was daunted by the idea of delivering a session that was two hours long, as I was previously only used to delivering much shorter presentations. I was also aware that in the past, I sometimes speed up my speech as a result of being nervous. As I delivered each session, I was mindful of my nerves and became much more relaxed and informal in style. I noticed that I began to more readily involve the learners in the sessions and became more comfortable when there was a silence. Eventually, after delivering a number of sessions with adequate preparation I found myself unphased by the idea of delivering a two-hour session to a variety of learner groups.

For my larger session at the Staffordshire University I asked my personal tutor to observe the session and provide me with formal feedback. My tutor is a registered Health Psychologist and experienced lecturer at Staffordshire University and provided me with insightful and supportive feedback following my larger session at the University. I was initially disappointed following this session, due to the fact that turn out and engagement was poor, however, at the end of the session two students came to talk to me about the content and asked If I could provide them with further information into the topic. I reflected on this and was encouraged that I had inspired these learners to try and seek further information about this topic. Subsequently, I received feedback from my personal tutor, I was really surprised by some of the positive feedback comments about my teaching style such as;

'…Ellen uses questions effectively and allows students space to think. She prompts for further information to get them to think in more detail about their answers.'

'…Ellen had a really nice engagement style which was conversational in tone. This encouraged students to contribute'.

I reflected that my large teaching session must have engaged students more than I initially thought and self-perception can sometimes be at odds with how others perceive situations. This experience ultimately demonstrated to me the importance of receiving feedback from peers in addition to self-reflection.

Limitations and Challenges

One of the primary challenges throughout the course of my teaching programme was a lack of engagement from learner groups. During the two sessions I took at the college. I found both difficult to engage students in the interactive nature of the materials I had prepared. I tried a number of methods, attempting to put the students at ease and make the sessions fun and interactive as this has been shown to enhance engagement (Lim, 2017). For example, I started with a very simple and interactive quiz which emphasised the innovative nature of new health technology by making a comparison to technology from popular culture. The groups were relatively small, and I attempted to create a relaxed and informal environment by asking conversational questions. Having reflected since delivering the session, I think the college learners needed more background and potentially felt the learning materials were not focused enough on what they were interested in or trying to achieve as part of their course. I think the less experienced students would have preferred

the sessions to be less interactive and more structured and informative. It has been suggested that learners are less likely to engage and speak out if they do not understand the content (Laidlaw 2009). I could have more effectively used the 'remembering' and 'understanding' elements of Bloom's taxonomy of learning before moving to 'analysing' and 'applying' to ensure learners were following the session materials (Bloom, 1956). In contrast, the University students and healthcare professionals appeared to be very engaged with the interactive elements of the sessions and enjoyed the interactive quiz. I reflected on this and concluded that in future I may need to assess student motivations more rigorously to ensure that I am adapting sessions to meet learner need.

I had arranged as part of my teaching portfolio to deliver a session to around 50+ Undergraduate Psychology students at Staffordshire University, however, as the Covid-19 pandemic began fewer students were attending lectures and many people were staying at home where possible. Fortunately, my teaching session with the Undergraduate group was planned prior to the national lock down of all but essential services, but still meant that there was a significantly reduced number of students that attended my session. The session was held in a lecture theatre and 27 students attended. Initially, I was concerned that this would not be a large enough group to count towards my competency and felt frustrated by this as I had been planning for the session for a while. However, this number was signed off due to the unprecedented situation of the global pandemic.

As the country moved into a state of national lockdown due to the Covid-19 pandemic, I began to work virtually for all my meetings and teaching sessions, which I found challenging. Despite these limitations, my experience of planning the sessions had demonstrated that learning embeds most effectively through engaging, analysing, applying and problem solving with others (Jensen, 2008). Despite the new ways of working, I wanted to make sure that each session was still student-centred, collaborative and that students were able to participate as much as possible, engaging with the session materials and other students (Baeten et al., 2010). I feel I achieved this outcome and overcame this limitation through a patient and more structured approach, while using online virtual learning resources (Microsoft Teams). I have now had experience of delivering a teaching programme in both a pre and post pandemic world and this has equipped me to rise to the challenge of engaging learner groups in a virtual setting. Online delivery of sessions was very fitting and in keeping with the theme of my teaching programme (TEH), for example it became easy to engage students in a discussion about the implications for delivering healthcare services virtually, as a result of the global pandemic, as it was at the forefront of everyone's collective thinking.

Areas for improvement

Following each session, I made reflective notes using Gibbs reflective cycle (Gibbs, 1988). Firstly, I described what had happened and focused on what went well, how I felt about the teaching experience and where I felt I could have changed my planning method or delivery style to improve my session. I also looked at instances where I had felt I may have changed my approach and if the situation arose again, I made a note of what I would do differently.

After reflecting on my sessions, I recognised that time keeping in sessions is something that still requires improvement, as I regularly did not fill all of the time I was hoping to with my session materials. This was echoed by some of the feedback I received;

'…Ellen, generally, had a good pace to her teaching – at times it was a little quick but strategies were in place to check student understanding of the content presented.'

The speed of information being passed to learners is something I have since reflected on and I concluded that I could use more time in each session to conduct informal discussions with the class and provide more background and detail to the topic. I feel that sometimes I struggled to understand the level of learners and am guilty of teaching at a level that I understand without realising that learners may initially require a more comprehensive background. I reflected that I should not be afraid to include further detail in my teaching sessions and slow down the flow of information being passed to learners.

Another area that I reflected could be improved in future sessions was the usefulness of the activities in my session, based on the size of the groups I was teaching. I used a similar activity in all of the sessions which involved providing students with some patient-based scenarios and asked them to come up with a viable digital solution based on the information they had learnt in the session. I reflected that I could have improved engagement by adapting the group activity dependent on group size. For example, the room at Staffordshire University was set up in a lecture theatre style and was not conducive to students working in smaller groups or walking around to receive informal feedback and make suggestions during the activity. My tutor provided me with some useful feedback suggesting that I could ask students to provide some examples of digital healthcare tools (e.g. health apps) prior to demonstrating them in the lecture via the slides. This highlighted to me the importance of assessing learner needs and reflecting on the characteristics and methods of the delivery of the session prior to delivering it.

Summary

Despite my initial apprehension with regard to planning and delivering the teaching programme I found that the evaluation of each session provided me with new insight and encouraged my teaching style and methods to develop. Using reflective practice effectively, has led me to think more deeply about the successes of each teaching session in addition to addressing areas which require improvement. The variety and diversity of my learner groups and the challenge of the global pandemic ending the possibility of face to face teaching has enabled me to adapt quickly to new methods for delivery and improved my confidence when facing new and unpredictable challenges.

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Chapter 5. Consultancy Skills

5.1 Consultancy Contract

THIS CONSULTANCY AGREEMENT (the “Agreement”) dated 14th July 2020

between the parties (the “Parties”):
Ellen Hughes of Staffordshire University (the “Contractor”)
And X Trust (the “Client”)

1. BACKGROUND

1.1. The Client holds the opinion that the Contractor has the necessary qualifications and abilities to provide the Services to the Client.
1.2. The Contractor is agreeable to providing the Services (the “Services”) to the Client on the terms and conditions outlined in this Agreement.
1.3. In providing the Services outlined in this Agreement, it is understood that the Contractor is acting as an independent contractor and not an employee of the Client. This Agreement is exclusively a contract for the Services.
1.4. This consultancy work will be written up as a case study for the Contractor’s Professional Doctorate in Health Psychology at Staffordshire University.

2. CLIENT CONSENT

2.1. A consent form with more information, to be completed by the Client if they agree, is provided as a supplementary document to this Consultancy Agreement.

3. TERM

3.1. The term of this Agreement (the “Term”) will begin on the date of this Agreement and will remain in effect until 31st January 2021. This is the agreed date for the provision of Services. This is subject to earlier termination, as outlined in this Agreement, or further extension, following the written consent of both Parties.

4. SERVICES

4.1. The Services to be provided by the Contractor to the Client consist of the design and development of a survey to evaluate the use of the Clinical reflective mobile application
4.2. The Evaluation Survey will be developed by the Contractor and reviewed by the Client before a final version is sent out to clinicians working in the acute hospital. By the end of the Term the Evaluation Survey will be disseminated to between 8-10 clinicians within

5. TERMINATION

5.1. If the Contractor is not able to provide the aforementioned Services due to circumstances beyond their control (e.g. injury, illness or force majeure), they shall notify the Client as soon as is reasonably feasible. In the event that either Party

wishes to terminate this Agreement, that Party will be required to provide 7 days' notice to the other Party.

5.2. In the event that the Contractor terminates this Agreement, any work already conducted will be transferred to the Client. In the event that the Client terminates this Agreement, any work already conducted will remain the sole property of the Contractor.

6. DELIVERABLES AND ANTICIPATED MILESTONES

6.1. At the end of the Term, the completed Evaluation Survey will be delivered online and in hard copy format to the Client. Anticipated milestones (the "Milestones") are outlined below in addition to targets for the completion of certain stages of the Evaluation Survey development process:

- 1st September 2020: First draft of the evaluation survey shared with the Client
- 1st October 2020 – 31st January 2021: Evaluation survey finalised and disseminated, both virtually and via hard copy, to pre-selected clinicians within Russell's Hall Hospital

6.2. These Milestones are as a guide and for reference only. The Contractor is not bound to delivering evidence of these during the course of the Term. This excludes the final milestone which will be delivered no later than 31st January. The Milestones will act as a guide for the discussion of progress and content.

7. ROLES OF THE PARTIES

7.1. The Parties agree to do everything necessary to ensure that the terms of this Agreement take effect.

7.2. The Contractor agrees to provide the Services as outlined in this Agreement to the Client.

7.3. The Client agrees to provide the Contractor with access to the Qi Notify Application design enabling the Evaluation Survey to be drawn up.

7.4. The Client will be the main point of contact for the Contractor throughout the duration of the Term.

7.5. Both the Client and Contractor agree to monthly contact, either by email or phone, to discuss the programme and its progress. If possible, the Parties shall arrange a face to face (via a virtual platform) meeting during the Term.

8. CONFIDENTIAL INFORMATION AND CLIENT PROPERTY

8.1. Confidential information ("Confidential Information") refers to any data or information relating to the Client group, whether business or personal, which would reasonably be considered to be private or proprietary to the Client and not generally known and where the release of that Confidential Information could reasonably be expected to cause harm to the Client. The Contractor agrees not to disclose, divulge, report or use, for any purpose, Confidential Information which the Contractor has obtained, except as authorised by the Client or as required by law. The obligations of confidentiality will apply during the term of this Agreement and will survive indefinitely upon termination of this Agreement.

9. RETURN OF PROPERTY

9.1. Upon the expiry or termination of this Agreement, the Contractor and the Client will return any property, documentation, records, or Confidential Information to the other respective Party.

10. COMPENSATION

10.1. For the Services rendered by the Contractor as required by this Agreement, there will be no monetary payment or reimbursement.

11. RESOURCES

11.1. Resources used to inform the content of the Evaluation Survey will be academic peer reviewed studies, primarily those free to use in the public domain or accessible through Staffordshire University Library. Any costs incurred in accessing resources not in the public domain will be incurred by the Contractor.

12. INTELLECTUAL PROPERTY

12.1. The Client's use of the intellectual property and related material (the "Intellectual Property") that is developed or produced under this Agreement, will not be restricted in any manner. If the Intellectual Property is to be used for purposes other than those stated in the Services, the Client agrees to inform the Contractor of this in writing. The Intellectual Property to the Evaluation Survey rights will remain with the Contractor throughout and after the Term.

13. NOTICE

13.1. All notices, requests, demands or other communications required or permitted by the terms of this Agreement will be given in writing and delivered to the Parties of the Agreement. Both letter or email are acceptable forms of communication.

14. DISPUTE RESOLUTION

14.1. In the event that a dispute arises out of or in connection with this Agreement, the Parties will attempt to resolve the dispute to the best of their abilities through friendly consultation. If the dispute is not resolved within a reasonable period, then any or all outstanding issues may be submitted for consideration to an independent arbitrator, who will pass judgement and mediate a resolution to the dispute.

15. GOVERNING LAW

15.1. It is the intention of the Parties to this Agreement that this Agreement and the performance under this Agreement, and all suits and special proceedings under this Agreement, be construed in accordance with and governed, to the exclusion of the law of any other forum, by the laws of the Country of England, without regard to the jurisdiction in which any action or special proceeding may be instituted.

16. ENTIRE AGREEMENT

16.1. This consultancy Agreement constitutes the entire Agreement between both Parties relating to the provision of Services. Both Parties acknowledge that they have not entered into this Agreement based on any warranty, representation, agreement

or condition affecting this Agreement except as expressly provided in this Agreement.

SIGNATURES

I hereby acknowledge receipt and accept the contents of this Agreement.

Signed _____ (Client)

Print name _____ Date __18/08/2020_____

I hereby acknowledge receipt and accept the contents of this Agreement.

Signed _____Ellen Hughes _____ (Contractor)

Print name _____ Date _____

A. SUPPLEMENTARY INFORMATION: FURTHER DETAILS OF THE EVALUATION SURVEY
    a. The App is intended to facilitate clinician's reflections on their clinical performance whilst caring for patients undergoing Emergency Laparotomy operations. The content and design of the Evaluation Survey is to be decided and developed by the Contractor in consultation with the Client. The Evaluation Survey will incorporate evaluation of the layout, design and functionality of the Qi Notify App for use in the acute hospital, the Evaluation Survey will additionally evaluate the clinicians' opinions on the content of the Qi Notify App and whether the Qi Notify App facilitates effective reflective practice. The survey will then be sent out to a group (between 8-10) of clinical staff who have had experience of using the Qi Notify App and will initially evaluate the effectiveness of the application, prior to further roll out across all staff in Russell's Hall Hospital. The structure and design of the survey will be informed by published and peer reviewed studies that have similarly evaluated clinical mobile applications with clinician input. The Evaluation Survey will be made available both online and in a hard copy format, dependent on the needs of individual clinicians.

5.2 Consultancy Case Study and Reflective Report

Consultancy Competency Case Study and Reflective Report

Introduction and background

Consultancy involves undertaking a project or piece of work for or on behalf of another party, based on pre-defined outcomes and scope (Block., 2011). Health Psychologists are well placed to conduct consultancy, in a variety of professional settings. Psychologists are able to incorporate a host of skills including, psychological intervention; knowledge of behaviour change models; teaching; training and research.

The consultancy process usually begins with identification of a 'Client' and Client need combined with an opportunity for the Consultant to utilise pre-existing skills which then develops into a formal agreement, working ultimately towards a pre-negotiated outcome. Throughout the process of consultancy it is vital to manage the relationship with the Client taking stock of their expectations and needs. It is also important to negotiate outcomes carefully prior to committing, contracting and commencing the project (Cope., 2010).

Here I describe a case study of my experience delivering consultancy, from identification of an opportunity to the final evaluation of Client satisfaction. Throughout this process I endeavoured to incorporate the core principles of consultancy set out by Earll and Bath (2004). This meant maximizing participation and reducing inequality, being solution focused throughout, ensuring solutions to real-life problems were workable. I also ensured I was working in a transparent and inclusive way and embedding new work into existing organisational structures.

I continuously reflected on the development of my capability and skill set as a 'Consultant' and a Trainee Health Psychologist prior, during and after the consultancy project. I used reflective methodologies to consider my own practice, including reflecting on the actions I took, what went well, not so well and what I would do differently in future (Gibbs, 1988).

Identifying the Consultancy Opportunity

My consultancy opportunity arose through a contact at a local NHS Trust that I was aware of through my previous work with an NHS Innovation organisation. The Client (identified for the purposes of anonymity as JS) approached me as they had begun to develop a mobile application to improve the reflective practice, quality and timeliness of services and outcomes for patients undergoing Emergency Laparotomy surgery in acute hospital settings. The Client explained that they wanted to 'formally' evaluate the mobile application to ensure it provided ample opportunity for clinicians to reflect in addition to gathering understanding about whether the App was appropriate for the particular health setting and clinical area where it would be implemented. JS also wanted to understand if the App was functionally appropriate for general use in a clinical setting and capture the thoughts of clinicians involved in determining pathways of care for patients undergoing Emergency Laparotomy procedures in acute hospital settings.

Emergency Laparotomy is a high-risk major surgical procedure, with approximately 30,000 operations performed every year in the UK (Barrow et al., 2013). Care is complex, with patients journeying through multiple departments, and outcomes vary with a 30 day hospital mortality typically greater than 10%. The Client recognised an urgent need to learn from case note reviews in these settings, however because reviews are resource heavy and time consuming, they are typically only performed following a perceived deficit in care delivery and not after each treatment pathway is complete. The App was therefore designed to assist local teams in performing mini case note reviews and thereby support Quality Improvement (QI) work through reflection and monitoring. The consultancy requested was a comprehensive evaluation of the proposed functionality of this new App, ready for a launch in a single acute hospital. The evaluation was initially intended for Anaesthetists and Surgeons working in the Emergency Laparotomy acute pathway but would incorporate further clinical staff as the App was rolled out across the pathway.

The individual or organisation requesting or sometimes commissioning the consultancy work is known as the Client. The Client can be defined as anyone who is positively impacted by the consultancy. For example, the Client in this instance could be both the developer of the mobile App but additionally the NHS Trust and Lead clinician (Brugha and Varvasovsky, 2000). Third parties indirectly impacted by the work can be described as stakeholders. Block (2011) categorises parties impacted by the consultancy. This categorisation positions the primary Client as the 'change sponsor' who has the power to approve the work. Block (2011) describes the consultant as the 'change agent' and the finally the 'change target' as those who are end users of the product provided by the consultant.

I began by conducting a stakeholder analysis to map the needs of the various Clients and stakeholders who may be impacted by or benefit from the consultancy work being undertaken. It was also important to fully understand the problem definition, avoid scope creep and unwanted or unforeseen outcomes (Boulton., 2003). A stakeholder analysis also allows the consultant to understand who has influence over the project and how significant this influence is (Brugha & Varvasovszky, 2000). Table 1 presents a summary of the Stakeholder Analysis.

Table 1. Stakeholder Analysis

Stakeholder	**Interest (degree of being affected)**	**Power (influence over project)**
JS Lead clinician/App creator (change sponsor)	High – Primary Client, initiated the project. Very interested in the outcome of the evaluation as this has implications for the uptake and use of the App in the future.	High – wants to shape the evaluation to improve overall usage of the mobile application
Local NHS Trust (change sponsor)	Medium – Interested in the outcome of the evaluation as they have Intellectual property in the end product	High – commissioning the development of the app and enabling the app to be used along the hospital's clinical pathways.
App developer (change sponsor)	Medium – Interested in the outcome of the evaluation as this may lead to future iterations of the App	Medium – they have high influence over the development of the app they are less influential regarding the evaluation
Clinicians using and evaluating the App (change target)	Medium interest in the outcomes and process of evaluating the App as they will be the end users of the end App	Low – the clinicians will have awareness of the App and will be the recipients of the evaluation.

Patients impacted by improved surgical pathway (change target)	Low – patients will have low interest in the evaluation of the App and be unaware of this clinical pathway due to the nature of having an emergency laparotomy. The patients who have undergone this operation will be aware of potential quality improvement in the clinical pathway leading to emergency laparotomy	Low – while patients will be interested in quality improvement along the emergency laparotomy pathway they will not directly evaluate or use the App as it is intended to use by clinicians

Note: JS was the primary Client and the main contact who I liaised with regularly and provided me with the information required to conduct the evaluation (Schein, 1997).

The stakeholder analysis was extremely useful for me to establish who would be the lead contact, who would impact on and be impacted by the consultancy and consider the needs of future beneficiaries (Earll & Bath, 2004). I reflected on how useful this process was and will make sure to conduct an analysis prior to any future consultancy work, particularly if these are complex or impact more than one individual.

The Project – Aims and Objectives

When assessing the scope of the project I wanted to first understand the original problem and the planned solution, in order to understand what specifically was being evaluated. I hoped to get a sense of the Client's journey to date, in addition to the current stage of the project. I entered as a consultant at a stage where the App was already being developed with an intention to test it in a specific acute hospital. It is important in this scoping phase to outline the expectations from both the Consultant and the Client and to express these clearly ensuring they are understood by both parties (Block 2011). I was aware that this initial scoping meeting, prior to a contract being drawn up, was non-binding and therefore was my opportunity as a Consultant to set boundaries and expectations. Boundary setting and negotiating terms were discussed in a Professional Doctorate teaching session around this time helping me to understand that this scoping phase was not just about the Client's wants, needs and expectations but also the consultant's opportunity to set parameters and requirements. For example, I requested a thorough background on the App in addition to the clinical pathway and types of clinical staff involved. I also wanted to set clear boundaries regarding my time as various projects were competing for my attention. I used this scoping

meeting to test initial deadlines which were accepted by the Client and also aligned with when the live version of the App would be ready for testing with clinicians.

The Client started off our communication by explaining that he planned to undertake a small pilot of the mobile phone App at his NHS hospital Trust with a group of clinicians including but not exclusively anaesthetists, surgeons, nurses and radiographers. The consultancy ask was for me to construct an evaluation survey that would capture the perceptions of the App and the outcomes of the pilot. We discussed this initially and decided that the evaluation should focus on four elements of the App; Content, Functionality, Design and Useability.
I met with the Client a second time to scope and understand the different elements that he wanted to explore via the evaluation and how big or small this should be. An evaluation of a product can take various forms ranging from extremely rigorous, for example a trial examining the efficacy of the App on clinical output, down to a basic Likert scale evaluation of the App by users. I wanted to be confident in my approach while discussing the different types of evaluation and made sure to research evaluation methods before speaking to the Client about these in detail. Following discussion with the Client it was clear he wanted to focus on the clinicians' perceptions of the App and complete evaluation of aspects of the App that could be further developed. I suggested we break it down into sections to make the questions easier to analyse and this was readily accepted by the Client. The opportunity to meet prior to agreeing a contract was helpful and in future consultations I would always hold a scoping meeting before formalising the consultancy arrangement.

Negotiation

Negotiation is a key skill and essential to the consultancy process, this involves understanding what the Client expects and wants from the project and equally what the Consultant is willing and capable of providing. Block (2011), suggests capturing the Client's essential and desirable wants to include in the consultancy agreement. This was my starting point when negotiating the consultancy, to get a clear understanding of the needs of the Client prior to negotiating terms that I could deliver.

My particular Client was aware that I was undertaking a Professional Doctorate in Health Psychology and I used my initial meeting to pitch myself and discuss some of the skills I had developed from the training so far. These include, research, interview techniques, analysis of data and reflective practice. The Client recognised that these skills were desirable for conducting this piece of work and I expanded on these when asked. I also included that I have had prior experience working as an NHS Project Manager and hold both PRINCE 2 (Managing Projects in Controlled Environments) Foundation and Practitioner qualifications.

The PRINCE 2 course provides training in examining stakeholder roles, setting timelines and keeping projects on track while mitigating for risks and issues affecting project success.

I recognised that the consultancy arrangement should meet the needs of the client but also that it was important for me to explore what I wanted from the consultancy (Cope, 2003). I successfully negotiated myself as a resource at this stage, indicating that I would be able to provide half a day per week over a designated time period. No fee was incurred for the consultancy however I designed a hypothetical budget. Deadlines are an important element to be communicated, agreed and met (Lippett & Lippett, 1986) and at this initial stage I negotiated a deadline for the work to align with the roll out with the App in the Hospital, this was also in line with my Professional Doctorate deadlines, taking into account competing workloads.

Earll and Bath (2004), suggest that the consultancy project should follow SMART objectives by being specific, measurable, achievable, realistic and timely. I considered all of these elements while negotiating with the Client prior to drawing up the contract. The process of writing the contract was challenging but I reflected that this was a brand new skill for me and decided to take a look at some previous consultancy contracts to get an idea of how to structure my own. I have had some experience with collaboration agreements, but I noted the importance of paying attention to detail and getting the wording right particularly relating to the delivery of the outcomes and being explicit about what the end product was.

Planning

As the consultancy involved a clinical group I had not worked with before, I began by researching the Emergency Laparotomy pathway and the clinical staff involved. I also made sure to familiarise myself with quality improvement methodology which underpinned the design of the App.

A key element of PRINCE 2 project management methodology is examining and recording lessons learnt before, during and after the project is complete to ensure mistakes are not repeated. Kahneman, Lovallo and Sibony, (2011), also describe the benefit of examining previous similar projects and making predictions for the current project based on these, effectively learning lessons prior to starting. I spent some time at the start of the consultancy reviewing evaluations of existing clinical Apps and methodologies describing the process of formulating evaluation surveys. This process was intended for me to learn more about how to effectively evaluate a digital product and how to focus on the reflective element specifically. My literature search returned a limited number of papers that had focused on

evaluating a clinical App, but I used what I found to help me to construct my own evaluation survey.

Completing a planning schedule, I worked backwards from our negotiated deadline, planning in time for dependencies, such as giving the Client ample time to review each version of the survey questions. Having control over the timelines of consultancy is not always possible if elements depend on stakeholder or Client input. I drew up a plan including key milestones and tasks to be completed by me as well as including dependencies from the Client. On reflection this was a useful exercise and something that I would always do when planning consultancy. Despite my forward planning my timelines slipped significantly as a result of the Covid-19 pandemic. This was a difficult event to anticipate and took both the Client and myself by surprise and effectively resulted in a complete pause to the planned timeline which was re-established following the initial pandemic lockdown.

Conducting and Managing the Consultancy

Once the project is underway it should be managed closely and appropriately, ensuring delivery is within scope, on time and that unforeseen circumstances are mitigated (Troper & Lopez, 2009). Having had experience working as an NHS project and programme manager and as a qualified PRINCE 2 practitioner I was aware of the pitfalls and challenges of managing a project that relied on external stakeholders, keeping in mind time constraints, risks, arising issues and competing priorities.

To manage this process effectively I used my Gantt chart of tasks and milestones which gave me an indication of how long each part of the project would take. Much of my consultancy was based on having access to the Client who would have the final sign off on each part of the evaluation survey. This made keeping to established timelines and deadlines challenging at times as the Client works as a consultant anaesthetist at a busy acute hospital and was not always available in regular working hours. While undertaking the consultancy I was on placement at a further education College and had many competing priorities that I was required by the college to manage, some of which arose daily and were not planned into my schedule. Despite our conflicting schedules, having a good relationship with my Client helped communication channels stay open.

Part of my learning and reflective journey while undertaking the consultancy included the realisation of the variety and potential of technology to assist my consultancy, particularly in terms of communication channels now available enabling collaborative working. While the

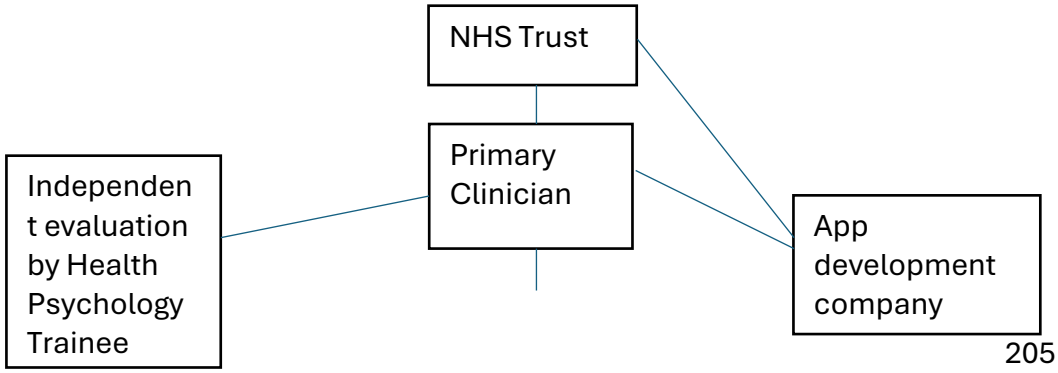
Client and I often liaised over the phone, we also used Microsoft Teams, WebEx, Google Hangouts and Jam board to scope ideas for what the evaluation should capture.

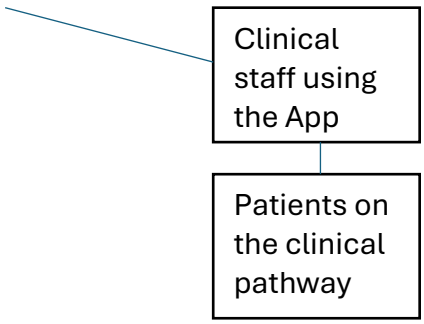
The Covid-19 Pandemic started in January 2020, and we went into a national Lockdown in March 2020, this was a challenging time for everyone, and many projects were thrown into a state of uncertainty as medical staff were asked to assist in the treatment of patients who had caught Covid-19. At this time I was working from home and could no longer hold face to face meetings with my Client who was working in an acute hospital setting. Thankfully, the technology enabled us to meet virtually and continue to discuss the next steps of the evaluation survey and the development of the App. On reflection I was pleased with how we managed this situation and I made sure to keep communication as simple as possible using techniques such as clearly labelling my email correspondence with titles such as 'for action' or 'for information only'. This technique ensured the Client knew which emails were a priority and helped me keep to agreed timelines.

Establishing and Maintaining the Working Relationship

As well as achieving the predefined project outcomes it is important to establish and maintain a good working relationship as described by Block's (2011) second level of consultancy. This relationship forms the foundation of the consultancy and can determine the level of success of the project (Cope, 2010). I felt it was important therefore, to foster a professional relationship using a friendly and open approach from the first interaction with the Client. I initially met the Client in person and had three initial meetings to understand the App and the Client's journey so far. We then discussed the need for evaluation in the early stages of the App development cycle to be able to incorporate these changes into future iterations of the App in the test site, prior to adoption and implementation in additional hospitals. I also had the opportunity to meet the App development company who were responsible for building and hosting the App. I ensured that I clearly distinguished my role within this group as demonstrated by the organigram in Figure 1.

Figure 1. Organigram of involved organisations and connections





It was very fortunate that I was able to meet with the client prior to the Covid-19 pandemic meaning I was able to build rapport face to face rather than online. This opened communication channels and made it easier to infer meaning and communicate once we were only able to virtually. We established communication channels early on and I initially took on board information about the project and actively listened to the client's experience. I made sure to ask detailed questions and used open responses encouraging the client to thoroughly explain the problem and solution in their own words so that I could clearly understand the root problem statement (Cohen, 2001). I wanted to foster a professional, honest and transparent relationship with my client for the best possible outcome and felt I achieved this by sharing problems promptly and openly throughout the process of establishing and maintaining the client relationship. These techniques are suggested by both Schein (1999) and Block (2011) who both advocate transparency for a successful consultant/client relationship.

Maintaining the relationship is also a vital element to ensure the success of the consultancy and the pre-defined outcomes. This process faced challenges as in March 2020 the country entered a state of national lockdown and my Client, as an anaesthetic consultant, was immediately required to work longer hours at the hospital as part of the NHS response. During this time, I was working from home and was able to communicate with my Client via email and occasionally over the phone. Due to the increased demand on care services, the development and implementation of the App that was due to be evaluated was delayed. Despite this, I continued to work with the client, albeit less frequently, in order to complete the evaluation ready for when the mobile App could go live in the hospital.

Aligning with Schein's (1999) model regarding the consultancy relationship, I provided the research expertise taking on the 'expert' role when it came to evaluation methodology . I reflected that this was sometimes not the best approach and may have occasionally caused the client to disengage or feel disempowered (Earll & Bath, 2004). The Client wanted to be involved and hold ultimate control over the project and ideally I wanted to work alongside the client to understand the outcomes they wanted to achieve from the evaluation. Schein

(1997) indicates that the consultant should facilitate but the client should own both the problem and the solution. This is how I conducted the consultancy ensuring that the client was involved and had control over the process at all times, while I facilitated and suggested elements of the evaluation. I sent some relevant health App evaluations to the Client to try and get an understanding of whether we were thinking along the same lines and facilitate shared understanding, which is vital to an effective outcome (Schein, 1999). During the course of the consultancy I sent a number of drafts of the evaluation to the client to ensure they were at all times contributing to the evaluation. We spoke on the phone about the questions that should be included in the evaluation. Effective communication was key to maintaining this relationship particularly as the pandemic made communication channels more difficult.

Evaluation of the Consultancy process

The final stage in Earll and Bath's (2004) process is evaluating the impact of the consultancy. Evaluation of the consultancy is vital to understand the Client's overall satisfaction of the work undertaken as part of the consultancy (Earll & Bath, 2004). This process can help the consultant to reflect and improve upon their consultancy skills for future projects (Block 2011).

Due to the impact of the Covid-19 pandemic, the 'go live' date of the App in the acute hospital setting was delayed repeatably throughout 2020 and therefore the evaluation of the App was not initiated during the timeline of my consultancy. Despite this set back I received excellent feedback from the Client who was pleased that the evaluation survey was ready to be rolled out once the App was able to go live in the acute hospital. The client specifically commented on both the flexibility, timeliness and quality of the survey. We spent time reviewing the questions and discussing how the survey would help the process of further developing the App once the data has been collected. I made sure to reflect on and evaluate my own practice as a consultant from my point of view as I had essentially acted as a resource to complete the project (Gloss, 2012). Given the unforeseen circumstances that arose during my consultation I feel I undertook the work in a professional and efficient way, on reflection I did a lot of background research into the clinical area and thoroughly understood the App prior to writing the survey. If I was undertaking the project again I would make sure that I more thoroughly anticipated risks around stakeholder time and unforeseen issues, I would try and write these up before starting.

Block (2011) suggests that, if conducted well, the end of the consultancy should leave the door open to future opportunities. I continue to stay close to the development of the reflective App project and I am still in touch with the Client on occasion to understand the progression of the evaluation and the further development of the App. There are potential opportunities to further evaluate and develop the App once clinical staff have had the chance to use it across several acute hospitals. Taking this in account, along with the positive feedback I received from the client I feel that my consultancy has been an overall success.

Conclusion and Final Reflection

To conclude, I was initially unfamiliar with the process of consultancy and writing a contact, it was a process that I had not initially associated as part of training to become a Health Psychologist. Training for this competency was insightful and the process of writing a contract and negotiating arising opportunities were new skills that I acquired. My capability to conduct consultancy in a Health Psychology context improved markedly. My skill set around setting boundaries for the scope of the consultancy and managing this with new and competing priorities developed well over the course of conducting the consultancy. My ability to manage unforeseen circumstances, for example the global pandemic impacting on my ability to liaise with my Client or other clinical staff challenged my ability to problem solve and think on my feet, while ensuring clarity and remaining professional. I reflected on my ability to work collaboratively with a Client and understand the nuances of the consultancy ask. These are skills that I will be able to draw upon in future.

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