**Exploring Psychological Well-being in Menopause**

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**Declaration and signature of the candidate**

**I confirm that the thesis submitted is the outcome of work that I have undertaken during my programme of study, and except where explicitly stated, it is all my own work.**

**I confirm that the decision to submit this thesis is my own.**

**I confirm that except where explicitly stated, the work has not been submitted for another academic award.**

**I confirm that the work has been conducted ethically and that I have maintained the anonymity of research participants at all times within the thesis.**

**Signed:………………………………………… Date:…………………………………………….**

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**Abstract**

This research thesis evaluates existing literature which considers the emotional impact of menopause and explores psychological well-being in menopause from a range of perspectives.

Chapter one is a literature review of nine empirical studies. The findings indicated that the experience of menopause, related changes and symptoms are associated with reduced emotional well-being. However, methodological quality of the literature reviewed was not consistent, classification of menopause stages was varied, reliability and validity information was not available for all measures used and other mid-life variables which may have been confounding were not measured.The results suggested that psychological and psychosocial aspects of menopause which can impact on well-being are complex and require further exploration to develop understanding.

Chapter two is an empirical study conducted at Staffordshire University which used Q methodology to explore different views on what is considered relevant to psychological well-being in menopause. Five women participated in a focus group and validated 80 statements. 15 women and two men participated in a Q sort of the statements. Data was analysed using principal component analysis and five factors were extracted using varimax rotation: 1. Going it alone. 2. Resilience and reaching out. 3. External solutions and treatment. 4. Resources, knowledge and proactivity. 5. Support, empathy and validation. The findings offer important contributions to the development of improved education, sources of support approaches to intervention and systemic work. The findings, limitations, clinical implications and areas for future research are discussed.

Chapter three is an executive summary of the empirical study, designed for general dissemination to a public audience, in community and virtual contexts.

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**Chapter 1: Literature Review**

Exploring the Emotional Impact of Menopause

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**Abstract**

Objectives:

The aim of this literature review is to evaluate the existing literature on the emotional impact of menopause.

Methods:

A literature search for the purpose of this review was conducted in June 2018 using Healthcare Databases Advanced Search tool (HDAS - NICE). AMED, BNI, CINAHL, EMBASE, HBE, HMIC, PubMed, PsychINFO and Medline databases were searched to identify relevant studies. No limits were applied in relation to research methodology.

The following terms, along with variations identified within each database using the thesaurus function available on HDAS, were used to search the literature by title and abstract: (“impact”) AND (“menopause”) AND (“Emotional” OR “Psychological”). The HDAS thesaurus function was used for each database search to identify papers which included variations of these terms.

Results:

2330 results were identified. Inclusion and exclusion criteria were applied to identify the most appropriate literature. The results were screened by title; 1223 records were excluded at this stage and 291 duplicates were removed. 816 records remained which were screened by title and abstract. 683 records were excluded at this stage. 133 records were screened by full text, leading to the exclusion of 111 records at this stage. 22 records were identified for inclusion in this review. 13 were excluded due to the researcher being unable to gain access to the full article texts. Access requests were made to authors of these articles; permissions for these papers had not been received at the time of conducting this review. 9 accessible studies which met the inclusion and exclusion criteria were selected for review.

Conclusion:

Further research is required to strengthen knowledge of non-biological processes and internalised messages which may impact on well-being in menopause. Further qualitative research which richly describes women’s experiences in this area would help to achieve this.

**Introduction**

Background

The menopause refers to the stage in a woman’s life when life when menstruation and reproductive function stops. Menopause is defined as being 12 months from the end of the last menstrual cycle and generally occurs between the ages of 45-55 years, in some cases women can experience menopause prematurely in their 30s (Women’s Health Concern, British Menopause Society - BMS, 2015).

Most women experience some problematic symptoms of menopause, though the experience can vary greatly between women. For many women menopause presents few problems, others can experience a range of physical and psychological symptoms which can cause varying degrees of distress. Severe menopause symptoms can greatly affect wellbeing (NCBI, 2014, NICE, 2012).

Biologically, the menopause is influenced by a change in hormone levels, namely oestrogen, the release of which is central to fertility processes. As women get older, less oestrogen is produced and fertility reduces. This process is usually gradual and can take several years. This stage of gradual change is known as perimenopause. (Women’s Health Concern, British Menopause Society – BMS, 2015). Perimenopause can last on average between 4-8 years prior to menopause (North American Menopause Society – NAMS, 2018).

Research suggests that women living in Western countries tend to report more problematic symptoms and that menopause is an important life stage for consideration in psychology, due to the large number of women who seek information, support, advice and treatment during this transition. Evidence-based information which draws upon an understanding of beliefs, social influences and physiological and psychological symptoms may better enable women to make informed choices about treatment (Ayers, Forshaw & Hunter, 2011). It is important to also consider personal factors which may mediate variability in the experience of distress.

In a 2008 study of attitudes to female life stages, people attributed the most negative emotions and terms relating to illness and ageing to menopausal women, more than double the amount of that which was attributed to a young mother. Younger women were particularly negative towards menopausal women and cultural variations existed between responses (Marvan & Chrisler et. al, 2008). Arguably these attitudes may be internalised by women and contribute to experiences of distress, with research findings reporting that women with more negative attitudes to menopause experienced more problems and symptoms. Women who had beliefs that when they experience the symptom of ‘hot flashes’ (or hot flushes) they are perceived negatively by others reported worse symptoms than women who did not hold negative beliefs (Ayers, Hunter & Forshaw, 2011). It is thought this internalisation of negative attitudes and beliefs from others (individuals and society) means that menopause becomes a source of shame (DeAngelis, 2010, American Psychological Association).

In terms of menopause-related psychological well-being, some researchers suggest that perimenopausal women are at higher risk of depression than pre-menopausal women (Cohen, Soares, Vitonis, Otto & Harlow, 2006) and that psychological distress is often the target of intervention by clinical psychologists in menopause (Hunter, Hunter & Kessler, 2014). Psychological distress does not seem to be solely due to the impact of biological and neurological changes, but to a range of potential additional factors. These factors include unpleasant physiological symptoms (NHS), other common life stage stressors, attitudes within the social environment, coping with symptoms, support from others and beliefs of the individual about the menopause process and the self (Shifren & Gass, 2014).

Current recommendations for clinical care of psychological difficulties relating to menopause include psychotherapy, pharmacological treatment and psycho-education. NICE guidance states that Cognitive Behaviour Therapy should be considered for low mood or anxiety as a result of menopause, without the use of pharmacological intervention unless accompanied by a diagnosis of depression (NICE, 2015).

The World Health Organisation seeks to build a research agenda which can ‘increase our understanding of health issues relating to ageing women and interventions’ with a focus on the experience of mid-life in cultural contexts, which should include changes related to menopause, with the aim of reducing ‘gender-based stereo-typing and the use of psychotropic drugs’ (WHO, Women Ageing and Health, 2007).

In Western society, the menopause is often viewed as a sign of ageing and of loss, both of constructs and perceived ideals such as attractiveness, femininity, youth and health as well as roles; within society, employment and the family. The meaning of this stage of life will vary between women and will influence the way they deal with the transition, along with factors such as personal circumstances and view of them and of ageing. Menopause is not generally portrayed in a positive light within society (NAMS, 2016) which may contribute to some women’s decreased sense of identity and well-being and some may view and experience the difficulties of menopause as a source of stigma. Unhelpful prominent messages which describe menopause in terms of loss, endings and label women as ‘less’ may persist and shape societal discourses around menopause. The meaning women and others may attach to menopause could arguably contribute to distress and negative experiences of the self and therefore of well-being: “Woman? She is a womb, and ovary…a woman is still relatively young when she loses the erotic attractiveness and fertility which, in the view of society and in her own, provide the justification for her existence and her opportunity for happiness. With no future, she still has about one half of her adult life to live.” (De Beauvoir, 1949).

A study of women working through menopause found that 51% of women in employment reported they found it somewhat to fairly difficult to manage life generally during menopausal transition, 5% reported great difficulty in this area and 44% of women reported no difficulty at all. Of the women who reported difficulties, the symptoms they identified as most problematic included poor concentration, tiredness, poor memory, feeling low/depressed and reduced confidence. Hot flushes were also identified as a main cause of distress. 42% of participants reported they felt their work performance had been negatively impacted. Menopause was identified as being a topic around which there is little awareness in the workplace, often regarded as ‘taboo’ and not openly spoken about, meaning many women did not feel they received adequate understanding or support. 17% agreed or strongly agreed that they believed their employers perceptions of them were negatively impacted due to menopause. Of the women who reported difficulties, 12% took time off, with only half feeling able to be openly genuine about the reason for their absence. Women scored ‘avoiding contact with others’ highly as a coping strategy for managing difficulties relating to symptoms (Griffiths, McLennan & Wong, 2010). Self-compassion, beliefs about control over menopause and the level of hot flush interference were found to be the strongest predictors of well-being in a recent study of menopausal factors, self-compassion and well-being. The study concluded that psychological aspects of menopause appear to be more strongly linked to psychological well-being than physiological symptoms and recommended consideration of the factors in supporting well-being in menopause (Brown, Bryant, Brown, Bei & Fudd, 2015).

The NICE recommendation of CBT for menopause related depression and anxiety could be seen as problematic, given that some research findings indicate that social factors impact upon women’s ability to seek support and that women experience a sense of social taboo around menopause. CBT treatment to help women who are feeling unsupported or invalidated in their experience of menopausal symptoms of psychological distress does not fit well with the aims of the model to address ‘maladaptive’ thinking styles. Such an approach may even perpetuate silence and stigma around menopausal difficulties, if women internalise messages of individual responsibility for difficulties which arise from biological processes and other factors which are outside of their control. It is arguable that a bottom-up approach, as in CBT, is unlikely to be the most suitable intervention to effect wider systemic change in response to menopausal difficulties, nor one which can address the reported current deficits in support of women’s well-being. “Sorrow is not itself evidence of maladjustment but of the adjustment process itself.” (Greer, 1991).

A recent media poll conducted on behalf of BBC Radio Sheffield collated responses from 1009 women aged between 50-60 years. Findings of the poll indicated that 25% of women who had experienced menopause reported it had made them want to stay at home. Overall, 44% said that menopause significantly affected their mood and mental health (48% of women in 50-55 years age group, 40% of women in the 56-60 years age group). 41% said it had affected their job. 23% said it lessened their enjoyment in life. 36% who experienced bothersome symptoms said that they had not visited their GP and 20% said their GP had been unhelpful in dealing with the symptoms when they had visited. 70% of women who were working at the time said they had not made their employer aware of their experience of symptoms (BBC News, 2018).

In a 2007 review of population-based evidence of a relationship between menopausal transition and mood, researchers concluded that there was a lack of evidence to indicate an association between menopause transition and adverse mood symptoms (Vesco et al, 2007). The review focused on evidence published from 1974 to 2007. The review identified factors which are associated with mood disturbances in menopausal women, such as a history of depression, and menopause symptoms such as hot flashes and difficulties sleeping. The review suggested that mood symptoms during menopause should be treated in relation to mental health diagnoses. The review included studies of mid-life women in menopausal transition which measured at least one mood or psychological symptom or mental health and well-being in the context of menopause. Menopausal stage was also to have been assessed on at least two occasions. The review excluded non-English, cross-sectional studies without mood evaluation, menopausal stage data, association between mood and menopause stage and those which were non-population based and involved fewer than 100 participants. The review focused on larger sample size cohort studies to reduce the chances that lack of association would be impacted by statistical power factors. Although larger longitudinal studies which assessed menopause and mood over time were included as a robust approach to minimising statistical power issues, smaller studies and those which reported more qualitative findings of women’s experiences of menopause were likely to have been over-looked. Quantitative methodologies, by nature of their design, would often involve participant numbers lower than 100. Some relationships between variables may also have been captured in cross-sectional studies and provided additional insights on the topic. The review did not evaluate the instruments used to measure mood within the included studies, which raises questions about how reliable included findings were, as reliability and validity of the measures should not be assumed. Recommendations for future research included use of continuous measures to capture mood difficulties associated with menopause, which may not meet clinical significance for diagnoses such as depression (Vesco et al, 2007).

The Department for Education found that menopause transition is characterised by a broad range of physical and psychological symptoms. Findings of existing research were collated within a review of the economic impact of menopause. Psychological symptoms included depression, anxiety, irritability, mood difficulties, reduced confidence and cognitive difficulties affecting memory and concentration. The review noted that the experience of menopause transition and symptoms differs between women and can impact adversely on individual experiences, relationships, performance and attendance at work. Estimates of the number of women negatively affected by menopause symptoms at work varied from 10% to 53%, demonstrating no clear pattern (Burton, Pransky, Conti and Edington 2004 in DoE 2017).

The DoE review also found that evidence does not classify symptoms consistently, which can make the synthesis of research findings complex. Domino effects were identified, meaning that there can be interplay between physical and psychological menopausal symptoms, and often one can contribute to or exacerbate another. For example, hot flushes and night sweats may contribute to insomnia, which may increase irritability, fatigue and impact on cognitive function. In turn, this may increase the risk of additional psychological symptoms, such as anxiety or low mood. Overall findings indicated that menopause symptoms can negatively impact mid-life women and their quality of life in the workplace (DoE, 2017). Similar complexity in the synthesis of findings, due to classification differences and interaction between physical and psychological symptoms, has been encountered during the process of this literature review.

Rationale for review

The relevance of a biopsychosocial understanding of menopause transition, as opposed to a solely physiological understanding, suggests additional complexity beyond hormonal change and physical symptoms. Biopsychosocial factors are implicated as pertinent in explaining differing experiences between women, and the interplay between menopause transition and other mid-life changes which can occur for women.

Based on current evidence, the research question this review attempts to answer is: What is the emotional impact of menopause?

**Methods**

Search Strategy:

A literature search for the purpose of this review was conducted in June 2018 using Healthcare Databases Advanced Search tool (HDAS - NICE). To enable a wide search of psychology and health related literature from a range of databases. AMED, BNI, CINAHL, EMBASE, HBE, HMIC, PubMed, PsychINFO and Medline databases was searched to identify relevant studies for inclusion. No limits were applied in relation to research methodology.

The following terms, along with variations identified within each database using the thesaurus function available on HDAS, were used to search the literature by title and abstract: (“impact”) AND (“menopause”) AND (“Emotional” OR “Psychological”).

Search results:

2330 papers were found through database searching. Inclusion and exclusion criteria were applied to identify the most appropriate literature for this review (see below and Table 1). These results were screened by title; 1223 records were excluded at this stage. 291 duplicates were removed. 816 records remained which were screened by title and abstract. 683 records were excluded at this stage. 133 records were screened by full text, leading to the exclusion of 111 records at this stage. 22 records were identified for inclusion in this review. 13 were excluded due to the researcher being unable to gain access to the full article texts for inclusion in this review. Attempts were made to contact the authors to request access; no response had been received in relation to these records at the time of compiling this report. The total number of accessible studies which met the inclusion and exclusion criteria and were selected for review was 9. A flow diagram of this search process is shown in Figure 1.

**Inclusion and Exclusion Criteria**

The following inclusion and exclusion criteria were applied to identify appropriate literature for review (Table 1).

Community studies, published in English, of Western women in the general population who had experienced naturally occurring menopause, and who were in late pre-menopause, perimenopause, menopause transition, early post-menopause, post menopause and late post-menopause phases, conducted post 2007 and which involved a psychological symptom focus or measure were included. A previous review of population-based evidence of a relationship between menopause and mood focused on literature published from 1974 to 2007 (Vesco, et al , 2007). Literature published post 2007 was included in this review to capture more up-to-date evidence which has been published since the 2007 review.

Studies of women who had experienced surgical or treatment induced menopause or early menopause only were excluded. Studies which focused only on pre-menopausal women or post-menopausal women or which involved populations with a pre-existing co-morbid physical health condition only, or women with a pre-existing mental health diagnosis only were also excluded. Studies which involved participants from non-community, specific populations, e.g. inpatient settings, were excluded. Studies which involved a physical symptom focus only and which did not include a psychological symptom measure or focus were also excluded. Of the studies, those which focused on non-emotional psychological symptoms only, e.g. cognition, were excluded.

**Table 1: Inclusion and Exclusion Criteria.**

|  |  |
| --- | --- |
| **Inclusion Criteria** | **Exclusion Criteria** |
| * Naturally occurring menopause * Studies of women * Menopause status - late pre-menopause, perimenopause, menopause transition, early post-menopause, post-menopause, late post-menopause.      * General population      * Published in English * Post 2007 - up to date literature from within the past 10 years. * General population, community * Psychological symptom focus or measure, in the context of menopause * Studies conducted with Western participants | * Surgically induced menopause only * Treatment induced menopause only * Early menopause * Pre menopause only studies * Post menopause only studies * Pre-existing co-morbid physical health condition not exclusive to menopause population e.g. fibromyalgia, HIV, cancer, diabetes, IBS. * Participants who are not menopause stage women – e.g., partners * Pre-existing mental health diagnosis population e.g. bipolar disorder, schizophrenia * Specific population – e.g. inpatient      * Menopause physical symptom treatment studies * Non-emotional focus psychological studies – e.g. cognition (only) * Physical symptom focus without reference to psychological symptoms |

Records identified through database searching  
(n = 2330)

Records excluded  
(n = 1223)

Records screened by title   
(n = 2330)

291 Duplicates removed

Records after duplicates removed   
(n = 816)

Records excluded (n = 683) inclusion/exclusion criteria not met

Records screened by title and abstract

(n = 816)

Full-text articles assessed for eligibility  
(n = 133)

Full-text articles excluded   
(n = 111) inclusion/exclusion criteria not met.

Unable to access (n = 13)

Results (n = 9)

Avis et al (2009)

Brown et al (2017)

Epperson et al (2012)

Greenblum et al (2012)

Hess et al (2012)

Lanza di Scalea et al (2012)

Pimenta et al (2011)

Whitely et al (2013)

Woods et al (2009)

**Figure 1: Search process flow diagram**

**Results**

Nine studies were included. Eight studies were quantitative in methodology (Avis, Colvin, Bromberger, Hess, Matthews, Ory & Shocken, 2009; Brown, Brown, Judd & Bryant, 2017; Epperson, Amin, Ruparel, Gur & Loughead, 2012; Greenblum, Rowe, Felber Neff & Greenblum, 2012; Hess, Thurston, Hays, Chang, Dillon, Ness, Bryce, Kappor & Matthews, 2012; Lanza di Scalea, Matthews, Avis, Thurston, Brown, Harlow and Bromberger, 2012; Woods, Mitchell, Percival, Smith-di-Julio, 2009). One study was qualitative in methodology (Pimenta, Leal, Maroco & Ramos, 2011; Whitely, da Costa DiBonaventura, Wagner, Alvir & Shah, 2013). A summary of the studies is shown in Table 2.

**Analysis and Critical Appraisal Process**

The papers were appraised using the Crowe Critical Appraisal Tool (CCAT) (Crowe, 2013) (Appendix 1). The CCAT is suitable for structured and consistent appraisal of studies with differing methodological approaches and has good construct validity and inter-rater reliability.

The CCAT guides structured evaluation of studies across eight areas. Each area has a corresponding checklist of criteria, to be considered before arriving at an area rating figure. Each area is given a rating between zero and five, providing an overall rating out of 40 across the eight domains. A higher score is indicative of greater study quality and studies are categorised, using total score ranges, as poor, average or good quality. The CCAT tool requires that scores across domains should be consistently good for papers to be rated as good. Lower individual domain scores would impact the final rating. A summary of the methodological quality of the included studies, as assessed using the CCAT, is shown in Table 3.

**Table 2: Article Summary Table**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Source** | **Problem/**  **Purpose** | **Design** | **Sample** | **Methods** | **Instruments (reliability and Validity)** | **Findings** | **Implications** | **Limitations** | **CCAT score** |
| Change in health-related quality of life over the menopausal transition in a multiethnic cohort of middle-aged women: Study of Women’s Health Across the Nation (SWAN)  Avis et al, 2009 | To examine changes in HRQoL during menopause transition, controlling for aging, symptoma nd other covariates | Prospective longitudinal cohort study | 3302 Multiethnic community based sample of US women aged 42 – 52 years across 7 sites. One minority population, one white population at each site. 47.8% white, 52.3% non white | Baseline interview and six annual assessments, community clinics, combination of trained interviewers and self report to collect data. Focus groups used to reduce cultural and langugae differences in responses to questions | SF-36 – in full at baseline, visit 1-3 & 6. Visit 4&5 abbreviated version (body pain and vitality only).  Validated. No vaslidtaed versions available in Japanes, Cantinese or Spanish at start of study. Non-validated translations used.  CES-D | No significant findings of reduced functioning in role-emotional. Symptoms significantly positively related to reduced function in role emotional, when adjusted for symptoms and other variables, menopause status no longer significantly related to role emotional. Depressive symptoms CES-D one of the strongest predictors of reduced functioning on all domains of SF-36 |  | Not at true nationality probability sample.  Women had more edcuation, higher incomes,less likely to smokerated themselves higher in pereived health than eligible women who did not enrol.  SF-36 mental health domain not inlcuded at every visit? Generic QOL measure, may not focus on specific issues relevant to menopausal women. | 29/40  73% |
| It’s not as bad as you think menopausal representations are more positive in postmenopausal women  Brown et al 2017 | To explore how menopause represenations might differ across menopausal stages. | Cross-sectional survey design, quantitative data. | 387 eligible women aged between 40-60 years, taken from a community electoral roll sample (Australia). | Participants responded to postal invtation to take part and completed questionnaires – menopausal representations, emotioanl represenatations, menopausal status. Data was analysed usinga series of one-way ANOVAs. Levene and Tukey Kramer tests used for post hoc analysis. | Menopausal represenations questionnaire (MRQ). 37 item scale. Adequate internal consistency (Cronbach’s 0.70-0.79) and good re-test reliability.  Emotional representations – Illness Perception Questionnaire (IPQ) reframed to relate directly to menopause. 6 item scale, (Cronbach’s in this study 0.90). | Significant difference in cogntiive and emotional represenattions across stages.  Postmeopausal women – more ositive cognitive and emotional representations than pre and peri menopausal. Positivity increased as menopause advanced. Stereotype internalisation may take place pre.  Anxious and depressive emotions reported in relation to menopause. | Meanings attributed to menopause and cultural negative menopause stereotypes may be influential in the expereince of midlife women. Clinicians can target treatment by addressing anxious and depressive emotions related to meaning, through psycho-education. | Cross ectional design – causal relationships cannot be inferred. Longitudinal studywould provide richer data and more generalisable findings. | 28/40  70% |
| Interactive Effects of Estrogen and Serotonin On Brain Activation During Working Memory and Affective Processing in Menopausal Women, Epperson et al 2012 | To investigate the role of estorgen decline in cognitive changes and mood instability in menopausal women | Double blind placebo controlled cross-over design. | 8 women aged between 45-60 years (mean 53.4 SD 3.9), without history of any significant medical problems e,g cancer, CVD, hypertension, neurological dsrder, head injury. Inclusion: menstrual irregularity, within 15 years of LMP, >20 UI/ml follicular stimulating hormone levels, without hormone use for minimum of 12 months. | Recruited via opportunity sampling – fliers, posters, paid advertising, word of mouth, home mailings.  History of no psychiatric or substance use disorder confirmed using SCID DSM-IV.  All completed 4 test days, monetary incentive for participation.  Participants fasted overnight prior to each test day. At each test day participants were given 70 capsules, containing either 31.5gm of amino acids without tryptophan (relaibly lowers plasma total and free tryptophan by 71-78% and results in behaviour/brain metabolism change) or 31.5gm of lactose.  Blood samples taken, fMRI scans conducted. After 2 test days, subjects took estradiol for 3 weeks, then attended test 3 and 4. Clinician and patient ratings of mood pre and (6hrs)post taking capsules. Cognitive and affective test. Emotion identification task. Data assessed for normality, analysed using probability plots and Kolmogarov-Smirnov test. Plasma results analaysed using linear mixed model. | 19 item Hamilton Depression Rating Scale (HDRS)  Profile of Mood States (POMS) – 65 adjective self report rating scale. | Significant individual effect of estrogen on brain activation during Emotion Identification task. Suggestive of interactive effect of serotonin and estrogen. | Hormone changes associated with menoause may impact on affective and cognitive processes?? | Small sample size – power. Interpret with caution. Estradiol placebo control group not included in the study.  Variation in time since LMP. Evidence suggests that time since LMP may impct estradio effects. | 31/40  78% |
| Midlife women: Symptoms associated with menopausal transition and early postmenopause and quality of life  Greenblum et el 2012 | To examine the effects of symptoms associated with the menopause transition and early menopasue on qulaity of life, comapring clusters of symptms and individual symptoms. | Cross sectional design. Data analysed using descriptive statistics and regression analyses. | 112 women aged 45-60 (M-52) years reporting at least one menopause symptom, taken from a convenience sample of 150 participants from a parent study. Recruited from an obs-gynae clinic in Florida. | Participants self selected to complete self report symptom and quality of life questionnaires anonymously , returned to a locked box at the study site. No identifying information was collected. Demographic data also collected. | Brief clinically relevant checklist of common symptoms adapted from the Kupperman Menopausal Index and Freeman, et al. Particpants to ask if they expereinced symptom and if they attributed it to menopause.  Psychological symptom scale adequate relaibility (Cronbach’s 0.597. Physical symptom 0.275, indicating diversity in symptoms and lack of ocnsistency in constructs.  QoL: Utian Quality of Life Scale – 23 item questionnaire, scored on a 1-5 Likert scale. Regarded as having good reliability and validity. | Physical and psychological symptoms clustered together. Strongest correlations within bivariate relationships were observed between the psychological variables of irritability, anxiety and fatigue. Strongest correlation with quality of life was observed with sleep.  95% of participants reported more than one symptom.Symptoms that most affected QoL (sleep disturbance, fatigue and anxiety) crossed clusters. | Non hormonal treatments for menopause transition are needed, due to risks. Therpay to treat sleep disorders and enaxiety should be consdiered as first line treatment. Estrogen based symptoms were not correlated wth QoL, which suggests symptom are not solely biologially determined. Women’s expereinces should be considered on individual basis, to reduce symptoms associated with menopausal transition and improve quality of life. | Symptom data – dichotomous variables based o whether expereinced or not and whether attributed or not. More detailed symptom data would have allowed for more robust factor analysis. Use of convenience smaple limits the generalisability of the findings. Cross sectional design measn that causal relationships cannot be inferred | 29/40  73% |
| The impact of menopause on health-related quality of life: results from the STRIDE longitudinal study  Hess et al 2012 | To examine impact of menopausal status on HRQoL | Longitudinal quantitative chort study. – 5 years | 732 women aged 40-65 (M=50.8) recruited from a single general medical practice., regardless of health condition. | Annual STRIDE questionnaires completed online or ver the phone.  Menopausal status assessed using bleeding pattern records/Stages of Reprodcutive Ageing classifications. Presence of symptoms, baseline attitudes, demographic and social support data collected. Analysed using linear mixed models and multinominal logisitic regression. | RAND -36 – Measure of physical and mental health (HRQoL).  Interpersonal social support evaluation list ISEL - | Compared to premenopausal, menopausal women (all stages) reported worse mental health. Impat most apparent for energy and fatugue.  Mental health and emotional well-being – more pronounced negtive impact late peri/early post. Significant cosnistent findings of negatiev impact fo menopause on HRQoL. | To look beyond classic menopausal symptoms towards a biopsychsocial modelto addres decline in HRQoL in menopause. | Potentially important variables associated with ageing not measured.  Sample - single site, may not be generalisable.  Primary care sample may not represent population.  Low response rate (732 out of 2181 potentially eligible)  Bias of adminitistration mode not assessed. | 32/40  80% |
|  |  |  |  |  |  |  |  |  |  |
| Role Stress, Role Reward, and Mental Health in a Multiethnic Sample of Midlife Women: Results from the Study of Women’s Health Across the Nation (SWAN)  Lanza di Scalea 2012 | To examine: 1. If role reward contributes directly to mental health and buffers –ve impact of stress 2. To look at associations related to role and mental variations by ethnicity, in midlife women. | Cross sectional design, within a longitudinal study. Logistic regression analysis to look for relationships between role stress and role reward in presenc/abcence of high depressive symptoms, anxiety, low social functioning. | 2459 women aged 45-55 participating in 3rd follow up of SWAN study (longitudinal population based study of menopause), caucasian and ethnic minority groups across 7 sites (US) | Mental health data was collected and measured using self report scales as part of annual SWAN follow up.  Role stress and reward data , demographic variables, perceived physical health and vasomotor symptoms data was also collected (self report). | CES-D 20 item scale measuring frequency and occurrence of depressive symptoms. Good relaibility and correlates well with other similarly administered measures.  Anxiety checklist measuring 4 symptoms, taken from a 15 item scale.  Short form SF-36 social functioning scale - 8 subscales measuring the impact of physical and mental health on social functioning. Good reliability and construct validity (Cronbach’s alpha 0,68-0.96).  Multiple role questionnaire – used to assess occuancy, stress and reward.  Category self assessed physical health data  Checklist of vasomotor symptoms in 2 weeks prior to interview. | Role reward buffers the –ve impact of stress on social functioning and depression, but not anxiety, in menopausal women. Minorities may be more likely to repsond to role stress by seeking social support. | The positive impact of role reqard on social functoning and depressio for menopausal women are important factors for clinicians to consider in approaching psycosocial interventions. Understadning how this may be further shaped by ethnicity. | Cross sectional anlyses, therefore directional relationships between role and mentla health cannot be implied.  All variables known to be relevant in roles and mental health were not assessed (e.g. coping styles, social support, working conditions.  Role combinations not controlled for. | 36/40  90% |
| Representat-ions and Perceived Consequenc-es of Menopause by Peri- and Post-Menopausal Portuguese Women: A Qualitative Research  Pimenta et al 2011 | To describe the represetations and perceived consequences of menopause, through semisturctured interviews of menopausal and post menopausal Portugese women. | Qualititive content analysis approach to analyse data collected in individual interviews. | 36 women aged 39-64 (M=56, SD = 5.369) recruited by non probablisitc snowball sampling.  6 in menopausal tranistion, 30 post menopause. | Interviews conducted with 36 women about their menopause representations and perceived positive and negative consequences. Analysed using content analysis and multiple correspondent analysis. | Menopause representations: What is menopause for you?  Positive consequences of menopause: Does menopause have any positive consequences? If so, which ones?  Negative consequences: Does menopause have any negative consequences? If so, which ones? | Positive consequences of menopause mentioned 63 times (16 sub categories), negative 93 times (31 subcategories). Higher perceived negative conseuquences than positive, in contrast to stdies which suggest either neutral or positive attitudes to menopause. Women described negative psychological changes (18.3% of all representations. 8.6% of these related to perceptions of loss). | Biological model can be internalised by women, attribute psychological diffciulties to menopause.  Healthcare professionals may reinforce psychosocial and cultural context. May be unhelpful. Insights into social and relationship impact. | Sociocultural bias, non generalisable, may not represent other populations. Nonprobabilis-tic sampling. | 30/40  75% |
| The Impact of Menopausal Symptoms on Quality of Life, Productivityand Economic Outcomes  Whitely et al 2013 | To investigate impact of menopausal symptoms on HRQoL, work impairment, healthcare utilisation and costs | Cross -sectional, existing data from annual health survey | 8811 women, 40-64 years without cancer history. 4116 reported menopausal symptoms, 4695 reported no symptoms. | Data from annual health survey analysed – self report internet based questionnaire. Stratified random sampling used to gain representative demographic sample of population. | Non validated questionnaire - presence of individual symptoms.  HRQoL measured using SF-8, an abbreviated version of SF-36. | Mood changes reported by 48% of symptoms present sample.  Depression and anxiety amongst symptoms with strongest effects in predicting HRQoL. | Women’s HRQoL may be greatly affected by depresion and anxiety symptoms. | Self reported data, not menopause specific data collection, so no information about surgical/natural menopause, menopause stage transitions not explicit. Cross sectional, may be other unmeasured confounding variables. | 32/40  80% |
| Is the Menopausal Transition Stressful? Observations of Perceived Stress from the Seattle Midlife Women's Health Study Woods 2009. | To assess whether perceived stress levels vary in relation to menopause transition.  Explore relationship between perceived stress and psychosocial factors. | Part of a larger longitudinal study. Seattle Midlife Women’s study. Interview data, questionnaire data, diary data. | 418 women, mean age of 41.3 years, who reported at least one perceived stress score, in late reporoductive/early menopause and early post menopause. 133 women of the cohort in a subset. | Participants inteviewed by researcher, provided annual questionnaire data, menstrual calendar and health diary. Subset: extra diary data and urine samples 8-12 times annually.  Demographic data collected. | Within annual questionnaires: Perceived stress measured using significantly correlated measure from a previous study. Menstrual stage defined as per STRAW study and measured using calendar data,  urinary assays – measure estrogen.  Social support – 6 item inventory, good reliability (cronbach’s alpha .73-.83)  Role Burden – Objective Burden Scale, 9 item, 5 point scale (reliability = chronbach’s alpha .71-.81 over all years. Annual health questionnaire –  Demographic data – parenting (Y/N), Sexual abuse (Y/N), | During late menopause transition stage women are more vulnerable to depression and increased preceived stress than in early postmenopaus.No relationship found between hot flush severity or hormone levels and perceived stress. Psychosocial factors found to be significant predictors during tranistion and early menopause. | Women may be more vulnerable to perceived stress and low mood at different stages of menopause. This may help to inform intervention, and also education for women around menopause. | Specific demographic, self-report data. | 25/40  63% |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Avis et al (2009) | Brown, et al (2017) | Epperson, et al (2012) | Greenblum et al (2012) | Hess, et al (2012) | Lanza di Scalea et al (2012) | Pimenta et al, (2011) | Whitely, et al (2013) | Woods, et al (2009) |
| Preliminaries | 4 | 3 | 4 | 4 | 4 | 5 | 4 | 4 | 3 |
| Introduction | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 |
| Design | 4 | 4 | 5 | 3 | 3 | 4 | 4 | 4 | 3 |
| Sampling | 2 | 3 | 3 | 3 | 3 | 4 | 2 | 5 | 3 |
| Data Collection | 5 | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 |
| Ethical issues | 2 | 2 | 3 | 3 | 4 | 3 | 2 | 4 | 1 |
| Results | 4 | 3 | 4 | 4 | 4 | 4 | 5 | 4 | 4 |
| Discussion | 4 | 4 | 5 | 3 | 5 | 4 | 5 | 4 | 3 |
| Total | 29 | 28 | 31 | 29 | 32 | 36 | 30 | 32 | 25 |
| Percentage | 73 | 70 | 78 | 73 | 80 | 90 | 75 | 80 | 63 |
| Rating | Average | Average | Good | Average | Good | Good | Average | Good | Poor |

**Table 3: Quality assessment of included studies:**

**Aims and objectives:**

Avis, et al (2009) examined changes in HRQoL in menopause transition. They identified three clear aims - to investigate whether HRQoL changes over the course of menopause transition (adjusted for chronological ageing), whether the role of symptoms in predicting changes in HRQoL and whether HRQoL changes over the menopause transition (adjusted for other HRQoL factors). They hypothesised that symptoms associated with menopause transition are associated with changes in HRQoL and that symptoms can explain changes in menopause status and HRQoL.

Brown et al (2017) set out their objective to investigate difference in cognitive and emotional representations of menopause at different menopause stages. They hypothesised that more positive representations would be observed in postmenopausal women, compared to premenopausal and perimenopausal women.

Epperson, et al (2012) aimed to test the hypothesis, developed from existing research, that menopause related changes in oestrogen may produce effects on cognition and mood by influencing serotonergic function.

The aims of Greenblum et al (2012) were detailed and specific. They aimed to examine symptoms associated with menopause which co-occur, to determine the impact of symptom clusters on quality of life and to develop a model of symptoms to predict which clusters most negatively impact quality of life.

Hess et al (2012) had clear aims of examining the impact of menopausal status on health related quality of life (HRQoL) and hypothesised that HRQoL would decrease around menopause transition stage and improve again beyond this.

Building on previous research and utilising existing participants enrolled in a large scale menopause study (SWAN), Lanza di Scalea et al (2012) identified that little is known about roles in relation to mental health in menopause and established clear aims to investigate whether role reward contributes directly to mental health and buffers stress, and to examine associations between role factors, mental health and variance by ethnicity. No clear hypothesis was presented.

Pimenta, et al (2011) clearly presented their aim to describe negative and positive representations and perceived consequences of menopause, through semi structured interview in perimenopause and post-menopause stages. As a qualitative study, no hypothesis was developed and emergent categories were to be derived from the data, using a framework of pre-existing categories within the interviews.

Whiteley et al (2012) aimed to investigate the impact of menopause symptoms, and their severity, on health related quality of life, work impairment, use of healthcare and related costs. A hypothesis was not defined in this study.

Woods, et al (2009) identified from existing research that studies of stress in midlife women had not examined the relationship of menopause transition (in the broader context of midlife) to perceived stress. They aimed to assess whether perceived stress levels vary in the context of menopause transition related factors. They also aimed to explore the relationships between perceived stress and psychosocial and aging factors during menopause transition and early menopause.

**Participants and settings:**

The number of participants in each study ranged from n = 8 to n = 881. Participants were recruited from community settings, including medical practices and clinics and from electoral roll data. The studies were conducted in Europe and the West.

**Inclusion and exclusion criteria:**

The studies used a range of inclusion and exclusion criteria. Avis et al (2009) did not detail any additional inclusion and exclusion criteria in relation to this paper. They referred to baseline eligibility criteria of the broader SWAN study. SWAN (at baseline) included women aged 42-52 years, who had an intact uterus and at least one ovary, who had not used hormones which affect ovarian function in the past three months, who had experienced at least one menstrual period in the last three months and who self-identified with a site’s designated ethnic group.

Brown et al (2017) recruited from a large community electoral roll sample. The study included women aged 40-60, in premenopausal, perimenopausal or postmenopausal stages, as identified by STRAW +10 criteria, who had expressed an interest in taking part in future research. Women who did not meet STRAW criteria for the menopausal stages or who did not fully complete the MRQ were excluded. Beyond this, exclusion criteria were not clearly defined. 517 women responded to invitations to take part, 30 of these were excluded due to incomplete MRQ scales, and a sample of 387 took part in the study. Clear reasons why the remaining 100 excluded participants of the total number of responders were not provided.

Epperson et al (2012) included women aged between 45-60 who had menstrual cycle irregularity or were within 15 years of their final menstrual period and had follicular stimulating hormone levels greater than 20 IU/ml. Additional inclusion criteria required participants to evidence normal smear, mammogram and pelvic examination results, from within the last year. Women with a history of significant physical health problems were excluded, as were women who had history of (Axis 1) psychiatric or substance use disorder and women who had used hormone treatment in in the last 12 months. All participants were right-handed.

Greenblum et al (2013) included women aged between 40-60 years who were enrolled in the parent study and who had reported at least one menopausal symptom. Inclusion and exclusion criteria were not described beyond this.

Hess, et al (2012) women aged 40-65 years who agreed they would be interested in hearing more about a menopause and HRQoL study (within a GP practice registration form), and who then consented to take part when approached.

Lanza di Scalea, et al (2012) included women aged 45-55 years who took part in the third wave of the SWAN study (a multi-site longitudinal study of menopause). Eligible women had an intact uterus and at least one ovary, were not pregnant or breastfeeding, had both menstruated and had not used hormones in the past three months. Women without complete data and women who reported they did not occupy any roles were excluded.

Pimenta, et al (2011) included women in menopausal transition (defined as having a variable cycle length or at least two missed cycles and an episode of amenorrhea of 60 days or more) and postmenopausal women (amenorrhea for at least 12 months). No further information about inclusion or exclusion is provided, so it is assumed there were no further criteria.

Whiteley et al (2103) included participants between the ages of 40-64 years, without a history of cancer and who had provided details of their menopause symptoms within the National Health and Wellness Survey. Those younger than 40 years and older than 64 years were excluded, as were males, women with history of cancer and those who had declined to report menopause symptoms.

Woods et al (2009) included women who had reported at least one perceived stress score in health reports beginning from 1990, who were in the late reproductive, early and late menopausal transition stages and early post-menopause during the course of the study. A subset of women who had provided urine samples beginning in 1996 was also included. Additional information around exclusion criteria is not explicitly mentioned in the paper.

**Measures**

There was variance across the studies in the use and reported validity and reliability of measures. Some used or modified existing standardised measures and some developed measures for the study; the quality of reporting of steps taken to ensure internal consistency also varied. All studies used at least one measure of emotional well-being, psychological symptoms or mood. The one qualitative study (Pimenta, 2011) explored consequences of menopause, which included psychological changes. Descriptions of measures used are included in the article summary table (Table 3).

Avis, et al (2009) used the SF-36 to measure HRQoL. They excluded physical functioning, mental health and health perceptions subscales, as these were being assessed separately. This partial use of the scale raises questions about reliability and validity of it when not used as a whole measure. Medical conditions were self-reported and coded as yes or no, physical activity was recorded based on frequency intensity and duration within the last year. Perceived stress was measured using the Perceived Stress Scale (ref and validity info), depressed mood was assessed using the Centre for Epidemiological Studies Depression Scale (CES-D) and stressful life events were in the past 12 months were measured using a self- rating of 0-2+, using a list tool developed within this study.

Brown, et al (2017) used the Menopausal Representations Questionnaire (MRQ) and reported adequate consistency (α 0.70-0.79) and good re-test reliability. Emotional representations were assessed using the Illness Perception Questionnaire (IPQ), modified to be menopause specific and confirmed as valid and reliable.

Epperson, et al (2012) conducted clinician ratings of mood using the Hamilton Depression Rating Scale (HDRS - Hamilton, 1960) and patient ratings of mood using the Profile of Mood States (POMS - McNair, et al, 1992) the morning prior to and six hours after administering an amino acid mixture or lactose sham. The amino acid mixture has been found to lower plasma and tryptophan (tryptophan depletion), which lowers serotonin and results in behavioural and/or brain metabolism change (Nugent, et al, 2008). This was done to mimic depressive menopause symptoms and declines in cognitive function. Women were subject to a cognitive and affective task (N-back Task) and an emotional identification task. The Emotional Identification task was used in line with existing research on tryptophan depletion and was selected to assess emotional bias and amygdala and orbital frontal cortex functions in amino acid and sham conditions. FMRI brain imaging was used to observe brain activity during tasks and at rest. Oestrogen levels were then manipulated using transdermal estradiol (oestrogen steroid patch) for 3 weeks and the mood rating, task and imaging process was repeated.

Greenblum, et al (21012) developed a brief checklist of symptoms adapted from the Kupperman Menopausal Index. Subscales for psychological symptoms were created, tested and assessed as having adequate reliability (α 0.597). The Utian Quality of Life Scale was used and regarded as consistent.

Hess, et al (2012) used the STRIDE questionnaire to collect bleeding patterns data, to classify participants’ menopause stage. HRQoL was measured using the RAND-36, similar to the SF-36, though described as being more suitable for assessing item responses. The RAND-36 contains mental and physical health measures across eight subscales. Validity and reliability information is not provided within the report, which raises questions around the quality of the data. Social support was measured using the Interpersonal Support Evaluation List (ISEL) and baseline attitudes to menopause data was collected using questions developed by the SWAN longitudinal study.

Lanza di Scalea, et al (2012) used the CES-D 20 item scale to measure frequency and occurrence of depressive symptoms. The Short form SF-36 was used to assess the impact of physical and mental health on social functioning. Good reliability and construct validity was reported for both. Anxiety was measured using a 4 item checklist, a multiple role questionnaire was used to assess role occupancy, stress and reward, physical health was self-reported and a checklist of vasomotor symptoms was used. No validity or reliability information was provided for these.

Pimenta, et al (2011) asked women about the positive and negative consequences and representations of menopause in face to face interviews.

Whitely, et al (2013) used a non-validated questionnaire to assess the presence of individual menopause symptoms (‘yes’ or ‘no’ response options), along with the SF-8, described as a validated measure of HRQoL. This is an abbreviated version of the SF-36 which is a generic multipurpose tool for assessing mental and physical health components.

Woods, et al (2009) used a measure of perceived stress taken from a clinic’s annual health questionnaire. No information around reliability or validity was provided. To assess menopausal stage, STRAW (Stages of Reproductive Ageing Workshop) classifications were used. Psychosocial factors were assessed using a six item inventory, adapted from the Arizona Social Support Inventory. Reliability information provided for this tool related to the period 1997-2005. Role burden was measured using the Objective Burden Scale. The reliability of this was assessed as good by the authors, using Cronbach’s test.

Reliability and validity is inconsistently reported between the papers. Where information about validity is not present, it is difficult to be certain that the findings represent a measure of the intended construct. Where reliability information is not provided, it is difficult to be certain that the measure would produce similar results consistently over time, across items and between participants. Therefore, questions around data quality are raised if clear information about the reliability and validity of measures used to obtain it is not known.

**Findings**

All nine studies identified factors associated with emotional changes in menopause or reduced psychological well-being.

Eight studies identified anxiety and/or depression or decline in mood in relation to menopause (Avis, 2009; Brown, 2017; Greenblum, 2012; Hess, 2012; Lanza di Scalea, 2012; Pimenta, 2011; Whitely, 2013 & Woods, 2009). Avis et al found that menopause related depressive symptoms were the greatest predictor of reduced functioning and Hess et al found that menopausal women reported worse mental health than non-menopausal women. Brown found that women attributed anxious and depressive symptoms to menopause and Lanza di Scalea found that whilst depression is buffered by role reward, this not the case for anxiety. Greenblum found that anxiety most affected quality of life. Pimenta found that 18.3% of the sample reported negative psychological consequences of menopause (8.6% related to loss) and overall negative consequences of menopause were reported more than positive consequences. This contrasted with findings from similar research which suggested prevalence of either neutral or positive attitudes to menopause. Whitely found that 48% of participants reported negative mood changes. Findings from the ninth study found a significant individual effect of oestrogen on brain activity during Emotion Identification tasks and suggested that oestrogen interacts with serotonin during menopause (Epperson, 2012).

Three studies found negative associations between menopause symptoms and quality of life (Greenblum, 2012, Hess, 2012 & Whiteley, 2013). Greenblum found that the symptom which had the strongest correlation with quality of life was sleep disturbance, which was highly correlated with symptoms of fatigue and anxiety. Whilst findings indicated that menopausal symptoms negatively affect quality of life, this was to a small extent. Hess reported significant consistent findings of reduced HRQoL throughout menopause and Whitely found that depression and anxiety had the greatest predictor effect on HRQoL.

Three of the studies investigated and found differences in the extent of menopausal psychological symptoms between menopause stages. All three found that more difficulties related to psychological well-being were reported in earlier menopause stages than in later stages (Brown et al, 2017; Hess et al, 2012 & and Woods et al, 2009). Brown found that premenopausal and perimenopausal women reported more negative cognitive and emotional representations of menopause than women in other menopause stages, and negative representations decreased as menopause advanced. Hess found that reports of worse mental health were most prominent in late perimenopause and earl post-menopause stages. Woods found that women were more vulnerable to depression and reported increased perceived stress during the menopause transition stage than women in early post-menopause. Woods also found that psychosocial factors such as employment were significant predictors of perceived stress during menopause transition and early post-menopause. One study found no relationship between menopause stages and reduced role-emotional functioning (Avis et al, 20009), once results were adjusted to account for symptom type and demographic variables.

One study found some interactions between physical menopausal symptoms and well-being (Greenblum, 2012), however oestrogen based symptoms were not significantly correlated with quality of life. One study found no relationship between hot flush severity, hormone levels and perceived stress (Woods, 2009). Greenblum found that physical symptoms and psychological symptoms tended to cross-cluster. The strongest correlation was found between anxiety, irritability and fatigue. Woods found that ageing effects and perceived health in menopause were associated with perceived stress.

**Limitations & Considerations**

Four of the papers in this review were appraised as being of good overall methodological quality (Epperson, 2012; Hess, 2012; Lanza di Scalea, 2012 & Whiteley, 2013), four were appraised as being of average methodological quality (Avia, 2009; Brown, 2017; Greenblum, 2012 & Pimenta, 2011) and one was appraised as being of poor methodological quality (Woods, 2009).

To get a multi-ethnic perspective, Avis et al (2009) used matched sampling. This ensured balanced inclusion of women from a range of minority groups and menopause data across a range of ethnicities was gathered and analysed. However, variations in experiences of menopause between cultures have been widely identified in existing research. Mental health data was not included in data collection at every visit and the generic quality of life scale used may not identify issues specific to menopausal women. Within the sample, women were more educated, earned higher incomes, were less likely to smoke and rated themselves higher in perceived health than eligible women who did not enrol. These factors may have compromised the generalisability of findings and could not be said to represent demographically different women.

Brown, et al (2017) used a cross-sectional design, which means that causal relationships between menopausal stage and representations cannot be inferred from the data. A longitudinal study, examining menopause over time, would have provided richer data and more generalisable findings.

A low power sample size (n=8) used in Epperson et al’s study (2012) means that findings must be interpreted carefully and results could not be generalised There was considerable variation between participants in the time since last menstrual period. Previous research indicates that time since last menstrual period can impact on the effects of oestrogen, which was manipulated in this study by administering hormone patches to participants. Therefore conclusions around the effects of oestrogen at different stages of menopause could not be drawn.

Hess, et al (2012) identified that they did not measure some potentially important variables associated with ageing and quality of life which may be also be important in relation to menopause and quality of life. The authors defined these as sexual activity, sleep, caregiving changes and medical conditions. The sample was also taken from a single site and demographic data was not provided therefore the sample may not represent the wider population. However, the study had a good response rate and recruited n=732 out a pool of 2181 potential participants and it would be likely that demographic variety was present to some degree. Biases may have existed between distribution modes of the questionnaire (online or over the phone) though these were not assessed. Online participants would have had no interaction with researchers; phone responders would have had some interaction with researchers. This is important because conversation and interaction with researchers whilst completing the questionnaire may have influenced responses in a different way to responses given online without this interaction. This could have influenced participants to be more or less responsive in either situation, depending on the questions and factors such as social desirability bias in self-reporting, although this could occur with any measure in any context.

Greenblum et al (2012) collected dichotomous variable data in relation to symptoms, based on whether a symptom was experienced or not experienced by women and whether they attributed it to menopause or not. Out of a sample who experienced at least one symptom and attributed it to menopause, 95 percent of women reported more than one symptom, more than 60 per cent of participants reported three or more symptoms. The use of a convenience sample limits the generalisability of the findings and the cross-sectional design means that causal relationships among symptoms and quality of life cannot be determined.

Lanza di Scalea, et al (2012).used cross- sectional data which means that a directional relationship between role and mental health during menopause cannot be implied. Some variables known to be relevant to roles and mental health were not assessed, e.g. coping styles, social support and working conditions, which may mean that important relevant factors are not accounted for. Role combination effects were not controlled for, which is important because multiple roles or particular role combinations may have influenced the results in a way that is not captured and increase the chance of type II errors.

Pimenta et al (2011) used interviews to gather qualitative data. Sociocultural bias may have been present in the sample due to lack of variation (all women were Portuguese) and therefore may not be representative of other populations.

Whiteley et al (2013) used self-report that was not menopause specific, therefore there was no indication of menopausal stage or clarity as to whether menopause was naturally occurring. As a cross sectional study, predictions around causality could not be made from this data and other unmeasured confounding variables may have impacted on the findings.

Woods et al (2009) used a combination of self-report, interview and diary data, along with annual health survey data. Reliability and validity information was provided, retention of participants over time is not provided and missing data figures were not reported.

Classification of menopause stage was not based on consistent or shared parameters across the studies. This means that when interpreting findings relating to stage-specific emotional well-being in menopause, consideration must be given to nuances between the studies. Whilst classification parameters and rationale for use of these do not vary greatly, drawing definitive comparisons and collective conclusions is problematic.

Some of the studies clearly reported the relaibility and validity of tools used to gather data, some omitted this information. This not only compromises the ability to assess the quality of the data and the strength of the findings, it also compromised methodological appraisal scores for these studies. This has consequences for the overall strength of evidence within this review.

All of the studies utilised self-report questionnaires or interviews to assess for well-being. Whilst this has many advantages, accuracy of self-reporting cannot be guaranteed. Further, findings within existing research which indicate that women may not always be truthful about menopause symptoms, to employers for example, must also be considered.

Bias may have influenced women’s choices to take part in studies of menopause, depedning on their individual experiences. It must be considered that women;s decision to take part in the studies may have been guided by their individual experiences of menopause and may have been more appealing to women with experience difficulties than to those with none. Bias of this kind could mean that findings do not represent a balanced range of positive and negative menopause experiences.

The presence of confounding variables which were unmeasured in the studies and their potential impact on findings must also be considered. Mid-life is associated with other changes, circumstances and narratives which may have contributed an unaccounted for effect on well-being scores and reports.

**Discussion**

This review appraised research which has been conducted in relation to emotional well-being in menopause. Nine papers were reviewed which have assessed the impact of menopause in relation to emotional factors.

The main findings from the majority of the reviewed papers were that the experience of menopause, related changes and symptoms can have an impact on women’s emotional well-being. This varied in relation to menopausal stage, with several reporting findings which indicate that earlier menopausal stages were associated with a greater emotional impact. Before conclusions relating to the emotional impact of menopause can be developed, similarities and differences in findings must be considered. The exclusion of 13 potentially relevant papers, which may have contributed additional findings, is an important limitation of the review.

**Clinical Implications and Future Research**

Psychological and psychosocial factors which can affect women’s quality of life and emotional experiences during menopause appear to require more exploration to develop greater understanding. Increased knowledge of vulnerability to distress, which acknowledges social, mental, emotional and physical factors may inform current knowledge, treatment, education and intervention. (Hess et al, 2012; Woods et al, 2009). Women’s mental health and social functioning in menopause may be positively impacted by role reward, though it is important for clinicians to be aware that this effect is in relation to depressive symptoms and may not be the case for anxious symptoms. Variation between ethnicities must also be considered (Avis et al , 2009 & Woods et al, 2009). Internalised messages relating to negative cutural stereotypes of menopause may need to be targets of intervention for anxious and depressive symptoms. Women may benefit from psycho-education in this area and exploration of meanings attributed to menopause (Brown, et al, 2017). Clinicians should be aware that social narratives of menopause as a negative construct or taboo subject may influence women’s disclosure of difficulties (DoE, 2017).

Findings within this review indicate that physical menopause symptoms may have a lesser effect on well-being and mental health when compared to psychosocial factors (Woods et al, 2009), although physical changes in the brain due to alteration in oestrogen levels during menopause have been observed to affect cognition, emotion identification and serotonin levels (Epperson et al, 2012). It is therefore important for clinicians to bear in mind that whilst physical symptoms such as hot flushes may be more overtly problematic for women, psychological and social factors may have a greater impact on well-being and should not be overlooked. However, a biological model can be internalised by some women and they will attribute psychological diffciulties to menopause, which healthcare professionals may reinforce (Pimenta et al, 2011).

Symptoms associated with hormone changes during menopause were not found to consistently correlate with reports of reduced quality of life, which indicates that psychological symptoms are not solely determined by biological changes (Greenblum et al, 2012) and that more understanding of non-biological factors is required.

Greater awareness of the potential differences in women’s vulnerability to psychological distress at different stages of menopause may help clinicians to identify and provide more individualised interventions for women, along with stage-specific educational material around symptoms and management. This awareness, through further research, may help to ensure that psychological symptoms in early menopause stages (when physical symptoms may not be as apparent) are better identified and reduce the potential for mis-diagnosis or inappropriate intervention (Brown et al, 2017; Hess et al, 2012 & Woods et al, 2009).

The extent of variation in women’s experiences should suggest that women’s experiences should be considered on an individual basis, taking into account current knowledge of symptoms commonly assciated with menopause, though not losing sight of women’s personal, cultural and social context. Understanding of the non-biological impact of menopause and women’s experience of internalised messages and social narratives would benefit from further research. Additional research may not only assist clinical staff in their understanding and recognition of menopause related psychological distress, but may also help to shape broader social awareness of and narratives around menopause, and may offer insights into the role of non-biological factors and experiences of distress.

**Critique of Review**;

The number of studies included in this review is limited, therefore it is difficult to draw clear conclusions around emotional well-being in menopause. The small number of stuides does not reflect a lack of research around menopause generally, though does reflect a disporportionate representation of research which addresses psychological aspects in comparison to research around physical aspects.

The exclusion of publications which were not in English and the inclusion of stuides which involved Western populations only means that studies which could have provided additional insight have not been fully explored. Translation facilities were not an available resource and global cultural differences in menopause experience has an existing body of knowledge which was not the focus of this review. A broader range of studies may have improved the generalisability and application of the findings to other populations.

Whilst every effort was made to conduct a varied search for relevant papers, using search terms across a range of databases, some may not have been captured in this search.

Conclusions

Eight studies identified factors which affect emotional well-being in menopause, to varying degrees. One study identified reduction in neurotransmitters which are indicated in depression. Findings included negative changes in mood, worse mental health, reduced quality of life, more difficulties relating toearlier stages of menopause and psychosocial factors were also found to be an influential aspect of women’s experiences during menopause. These findings pose significant clinical implications for approaches to intervention during menopause and highight areas for further research and exploration. Due to methodological issues, findings must be treated with some caution. Further research is required to strengthen knowledge in this area, to develop a greater understanding of non-biological processes which may impact on emotional well-being in menopause for some women. Whilst the quantitative findings present some interesting findings about the prevalence of menopausal psychological distress, there seems to be a need for richer data from more varied samples. This could be achieved through further qualitative research around the individual experiences of women and the impact of complex non-biological factors on their well-being and quality of life during menopause.

“There are as many menopauses as women” – Iris Murdoch.

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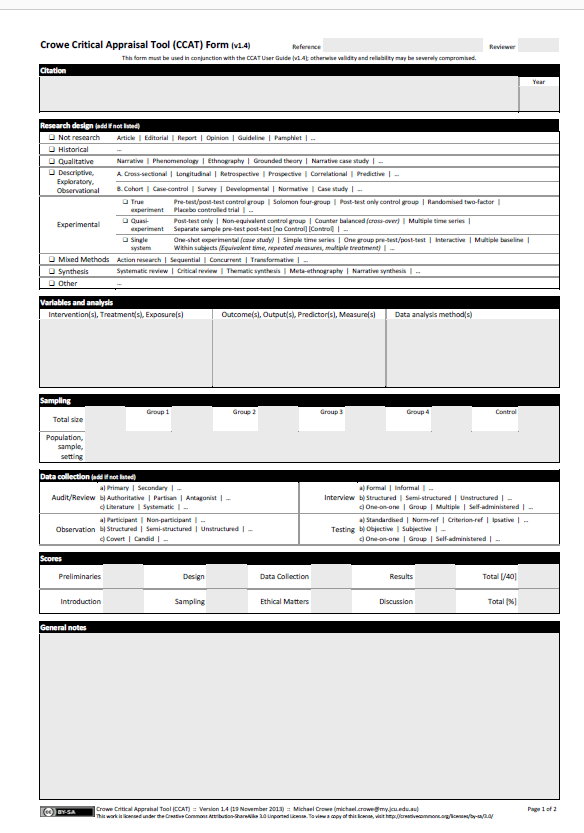
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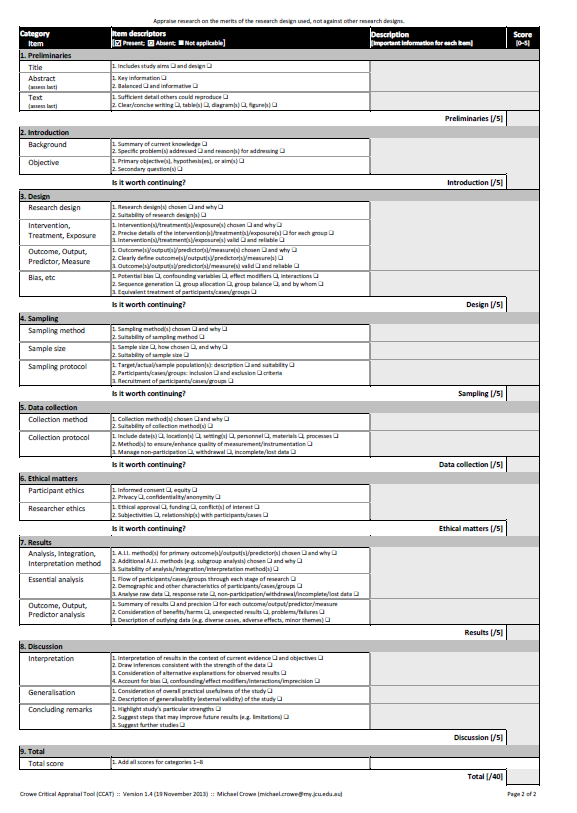
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**Appendices**

**Appendix 1: Crow Critical Appraisal Tool**

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**Appendix 2: Manuscript Submission Guidelines: *Post Reproductive Health***

Aims and Scope*:*

*Post Reproductive Health*(formerly Menopause International) is a MEDLINE indexed, peer reviewed source of news, research and opinion. Aimed at all those involved in the field of post reproductive health study and treatment, it is a vital resource for all practitioners and researchers. As the official journal of the British Menopause Society (BMS), *Post Reproductive Health* has a broad scope, tackling all the issues in this field, including the current controversies surrounding postmenopausal health and an ageing and expanding female population. Initially this journal will concentrate on the key areas of menopause, sexual health, urogynaecology, metabolic bone disease, cancer diagnosis and treatment, recovering from cancer, cardiovascular disease, cognition, prescribing, use of new hormone therapies, psychology, and the science of ageing, sociology, economics, and quality of life. However as a progressive and innovative journal the Editors are always willing to consider other areas relevant to this rapidly expanding area of healthcare.

**1.2 Article Types**

Please note that all word counts including the abstract, acknowledgements and references.

**Declarations**  
Please note all manuscripts should be accompanied by a separate document entitled ‘Declarations’. This should be submitted under the file Designation ‘Declarations’. This must include each of the below headings with the corresponding information. Please note that manuscripts which do not include these declarations will be returned. These headings will be published at the end of every accepted manuscript, where one of these headings is not applicable please indicate as such under the heading.  Please see [section 2.2](https://uk.sagepub.com/en-gb/eur/journal/post-reproductive-health#Declarations)for additional information regarding declarations.

***Review articles*:** a comprehensive review of prior publications relating to an important clinical subject (2,000–3,000 words and 30–50 references). An unstructured abstract of no more than 250 words is required. The Introduction should indicate why the topic is important and should state the specific objective of the review. The Conclusion should include the clinical implications and observations regarding the need for additional research. The review should include a summary of Practice Points and, if applicable, Auditable Standards. Systematic reviews should follow the QUOROM guidelines. Meta-analysis of observational studies should follow the MOOSE guidelines. <https://uk.sagepub.com/en-gb/eur/journal/post-reproductive-health#WhatDoWePublish>

**Chapter 2: Empirical Paper**

Exploring Psychological Well-Being in Menopause.

Word Count 8344

The Journal of Women & Ageing has been selected as an appropriate international publication of scholarly and clinical material, which has a suitable target audience of practitioners, educators and researchers, with an interest in the field of women in mid-life and beyond.

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**Abstract**

Objective: Q-methodology was used to explore a range of views about what is relevant to psychological well-being in menopause.

Design: A Q-set of 80 statements was developed through a literature review and validated by a focus group of 5 women with experience of menopause. 17 Q-sorts were completed by a range of people. Statements were sorted to reflect their view, from most to least relevant. Principal component analysis was used to identify distinct viewpoints.

Findings: Five factors, which explained 58% of the variance, were identified for interpretation: 1). Going it alone. 2). Resilience and reaching out. 3). External solutions and treatment. 4). Resources, knowledge and proactivity. 5). Support, empathy and validation. Psychological aspects and functioning were more relevant for perimenopausal women than for other women. Physical symptoms, treatment and health care was more relevant to women at menopause stage. Some variability in viewpoints of naturally occurring and early onset post-menopausal women was shown. Support from others was relevant. Participants without experience of menopause loaded across all factors.

Conclusions: Viewpoints of people without experience of menopause varied, with no clear consensus. Similarities existed between women and respective menopause stages. Perimenopausal women focused on psychological aspects, menopause stage women focused on physical aspects, postmenopausal women focused on resilience and responses of others. A range of biopsychosocial factors are relevant to psychological well-being in menopause. Difficulties are more relevant in early stages. Social and physiological factors are more prominent amongst women at post-menopause and can be mitigated by the aetiology of menopause. Combined biopsychosocial factors may be most relevant for women who experience significant difficulty.

Implications: Findings of this study are of relevance to healthcare professionals, to women across stages of menopause, to partners and families of women and in society. There is a role for clinical and community psychology in working systemically to improve education and raise social awareness of psychological well-being in menopause. The development of menopause support networks to facilitate story-sharing between women may reduce isolation for women who are struggling. Consideration of psychological well-being in menopause factors is important within health services accessed by mid-life women. Future research in this area may benefit from extension of recruitment to capture a broad demographically varied sample. Additional exploration of individual factors may reveal further insights on this topic.

Keywords: menopause, well-being, psychological, emotional, social.

**Introduction**

**Background**

Menopause is a natural process of ageing and refers to the female life stage when oestrogen production reduces and reproductive function stops. Menopause usually occurs between 45 and 55 years of age; the average age of menopause for women in the UK is 51 years (NHS, 2019). Menopause occurs earlier in some women or is induced as a result of surgical and medical interventions. (Women’s Health Concern, BMS, 2015).

Menopause symptoms can include a range of physiological, emotional and psychological changes. Symptoms of menopause can begin months or years before reproductive function stops. Symptoms usually last an average of four years after this, though can be experienced for much longer (NHS, 2019, NAMS, 2019).

For many women, symptoms of menopause will present minor problems, though there is great variation. Some women experience a variety of psychological and physical symptoms and increased degrees of severity are associated with increased levels of distress (NICE, 2012, NCBI, 2014).

Social, physical, and psychological aspects are implicated in psychological well-being in menopause.

*Social*

Social factors which may be relevant include attitudes to women (Marvan & Chrisler et al, 2008), support from others (Shiffren & Gass, 2014), beliefs women hold about others’ perceptions of menopause and physical symptoms (Ayers, Hunter & Forshaw, 2011) and broader negative social meanings, attitudes and beliefs around menopause (DeAngelis, 2010, NAMS, 2016). Some may view menopause as a source of stigma (De Angelis, 2010) and menopause may be viewed as a taboo topic, which can impact upon support (Griffiths McClennan & Wong, 2010) and upon attendance at work (Burton, Pransky, Conti & Edington, 2004, DoE, 2017).

*Psychological*

Psychological factors may include an increased risk of depression at perimenopause (Cohen, Soares, Vitonis, Otto & Harlow, 2006). More problems related to psychological symptoms are associated with earlier menopause stages generally (Brown et al, 2017; Hess et al, 2012 & and Woods et al, 2009). Psychological symptoms may include depression, anxiety, irritability, mood difficulties, reduced confidence and cognitive difficulties affecting memory and concentration (Burton, Pransky, Conti & Edington 2004, DoE 2017). Research suggests that psychological symptoms of menopause are more strongly linked to psychological well-being than physical symptoms (Brown, Bryant, Brown, Bei & Fudd, 2015).

*Physical*

Physical changes during menopause may result in a range of unpleasant symptoms (NHS, 2019). Common descriptions of menopause highlight hot flushes, sleep disturbance and fatigue being amongst the most problematic physical symptoms (Griffiths, McClennan and Wong, 2010).

National Statistics show that there is a suicide spike in women aged 50-54; this age group had the highest suicide rate amongst women in 2017 (6.8 women per 100,000) (Samaritans, 2018). Gender and life-stage factors can contribute to susceptibility to mental health difficulties. A range of complex factors appear to interact at mid-life, which may impact on women’s psychological well-being. Mid-life women are a diverse group who often occupy multiple roles, comprising a ‘load’ which is often unrecognised until difficulties with coping emerge. Disparity in socioeconomic power between men and women means that women as a whole face disproportionate challenges related to social position, status, future life opportunities, experiences in society, discrimination and social attitudes to ageing. Mid-life women may also face a range of significant life-changing events and adjustments, such as divorce, widowhood, financial disadvantages and changes in care-giving and family life. Psychological well-being in relation to menopause is of interest within this research, as a specific area of complexity within the broader context of factors which are pertinent to women’s mental health (Harlow & Derby, 2015, WHO, 2019, Milne & Williams, 2003).

Menopause research suggests identifying individual sources of psychological distress is complicated, due to the broad range of individual menopause symptoms between women, along with the plethora of social, cultural, psychological and physical elements which interact and which are subject to variation. This complexity may present obstacles to reaching consensus understandings and generalised approaches to psychological support and intervention to those women who are struggling.

Although the process of menopause has biological origins, the experience of menopause and related distress is not entirely explained by physiological changes and symptoms.

Non-academic sources identify biopsychosocial factors within the discourse as worthy of further exploration. These sources identify the need for improved support for women during the menopause process (medically, personally, psychologically, professionally and socially) and the need for greater awareness of how some women, and their mental health, can be impacted upon by the experience of menopause (BBC News, 2018, Menopause Matters, 2018, Make Menopause Matter Campaign, 2019, Nuffield Health, 2014, BBC Menopause Survey, 2018).

**Rationale for research**

Factors influencing psychological well-being in menopause extend beyond individual experience and biological processes. Social, cultural and psychological factors are indicated through research as also influential. In light of findings indicating the role of society and others in the experiences of women during menopause, this study seeks to explore a range of viewpoints on menopause, from women with experience of menopause and from others, including men. Consulting different perspectives in this way will provide insight into an issue which is linked to multiple influences and increase knowledge by revealing gaps in understanding. Exploration of shared and unshared views of what is relevant to psychological well-being in menopause will highlight targets for improved awareness, education, support and informed care. The use of Q methodology to support this, in which participants are variables, will enable disparate voices on the topic to be represented and heard.

**Aims and objectives**

The aims of this study are to explore a range of perspectives, from people with and without experience of menopause, about what constitutes and is relevant to psychological well-being in menopause. The findings from this study will add to existing knowledge in this area and contribute to developing approaches to psychological intervention, support and improved information and education resources.

The objectives are:

* To use Q-methodology to see how individual views on the topic may correspond and differentiate.
* To examine responses across and between participant demographic variables and to identify any common themes and characteristics that emerge.
* To increase knowledge about relevant factors, as identified by women themselves and by others, to improve general information about menopause and provide insights which may improve support for women who experience menopause -related distress and reduced quality of life.

**Method**

**Approvals**

Ethical approval to undertake this study was obtained from the sponsor, Staffordshire University (Appendix 1).

**Q-methodology**

Q-methodology was developed by Stephenson (1953) as an approach to explore subjective viewpoints. Q aims to establish that viewpoints exist, which can then be interpreted and compared (Watts & Stenner, 2012). Q invites participants to decide what is meaningful from their perspective, using a Q-sort process. Participants are asked to rank a set of statements (Q-set) related to a topic, in an order which best reflects their views, on a single, face-valid dimension (Watts & Stenner, 2012). Whole patterns of responses and correlations between participants and categories can be considered through the factorial analysis of statement ranking. This process reveals associations, differences and similarities in the expression of views, through the ranking of the same statements by a range of participants. It was chosen as an appropriate methodology for this study to enable consideration of a range of views from participants who have different perspectives, experiences and understandings of psychological well-being in menopause. The use of a focus group to identify and validate appropriate statements to be used within the Q-sort was chosen, to ensure that the statements reflected factors which are relevant to psychological well-being. This is in line with recommended Q-methodology procedure (Watts & Stenner, 2012).

**Design and materials**

A multi-participant Q-method design was used. A Q –set of 80 statements was developed using a three stage process. Between 60-90 statements is described as a statistically “good range” (Kerlinger, 1969).

First, preliminary themes and statements, which reflected the discourse around psychological well-being in menopause, were gathered through a review of academic literature, popularliterature and media sources. Second, preliminary themes and statements were validated by a focus group of women who had previous or current experience of menopause (experts by experience). Third, the statements were reviewed by trainee clinical psychologists who were familiar with Q-methodology, to ensure face validity.

The 80 statements reflected themes such as relationships, attitudes, meaning, roles, knowledge, support, preparedness, self-efficacy, functioning, acceptance, adjustment, identity, social factors, symptoms and treatment. The 80 statement Q-set is shown in Appendix 2.

A quasi-normal, forced choice distribution Q-grid was developed (figure 1), to be used by participants to sort the Q-set of statements. The Q-grid comprised of a scale which ranged from -7 (least relevant in my view) to +7 (most relevant in my view). This range enabled a symmetrical distribution matrix to be developed which could accommodate the 80 statements. Items of the scale were displayed on individual laminated grey cards with black text, the Q-set were displayed on 80 individual laminated white cards with black text. All cards measured 6cm x 4cm. An A3 laminated example of the Q-grid showing the forced choice layout was used to guide participants during their sort of the statements. Q-sorts were completed using the scale cards and statement cards on a table in the research interview room. This card and grid example format was used to allow easy transportation and storage of the Q-set. The sort question was displayed to help participants to keep this clearly in focus while completing the sort.

**Ethical Issues**

No ethical issues arose during the course of the research.



Figure 1: Q-sort grid

**Setting**

Focus group and Q-sort participants involved in the study met with the researcher at Staffordshire University, in rooms which are available for research interview purposes and met requirements for privacy and confidential participation.

**Participants and Recruitment**

Purposive snowball sampling was used to recruit a focus group sample and maximum variation purposive sampling was used to recruit a separate Q-sort sample. Five focus group participants and 17 Q-sort participants. Many Q studies involve between 12 and 20 participants. Guidelines on suggested Q sample sizes vary, though there is a consensus that fewer participants than statements are recommended (Watts & Stenner, 2012, Webler, Danielson, & Tuler, 2009). Participants were recruited via advertisement of the study at Staffordshire University sites. 22 participants in total took part in the study. Recruitment took place between February and April 2019.

Participants expressed their interest and self-referred to the study in response to poster advertisements (Appendix 3), via email using the researcher contact details provided. Participant Information sheets (PIS) (Appendix 4) were provided to potential participants and those who chose to take part after considering the PIS arranged to meet with the researcher at the University. Sources of information and support (Appendix 5) were provided within all PIS documents.

***Focus Group***

A single focus group took place in March 2019. Focus group participants were able to withdraw completely from the study up until the focus group meeting. Following commencement of the focus group, they could end their involvement in the discussion at any point, though their contributions to discussion up to that point could not be withdrawn. Focus group participants gave their consent; none withdrew (see Appendix 4, Appendix 6).

**Inclusion and Exclusion**

Inclusion criteria for the focus group were as follows; participants were female, over 18 and had current or previous personal experience of menopause. All were English speaking and able to read in English sufficiently to complete consent.

**Participant Characteristics**

Focus group participants were female, white British and aged between 47 and 64 years. One participant used HRT. Three participants were at menopause stage, two participants were post-menopause. All participants had experienced naturally occurring menopause within the average expected age range. Three participants were undergraduates (students), two participants were postgraduates (members of staff). Backgrounds were: social work (n=1), nursing (n=1), nursing and social work (n=1), psychology (n=1) and marketing (n=1).

**Procedure**

The participants responded to poster advertisements and contacted the researcher by email to express interest. The researcher returned contact by email, checked eligibility and provided electronic participant information sheets, including sources of information and support. Participants were given a minimum of 24 hours to consider the PIS. Participants were asked to make contact with the researcher if, after considering the information, they would like to participate. The participants then arranged to meet with the researcher at the University, to complete consent (Appendix 4) and attend the focus group.

Demographic information was collected and participants were asked to answer and discuss open questions about menopause (Appendix 5). The researcher cross- referenced themes from the discourse around the topic as the focus group discussion progressed (Appendix 6). Following the open discussion, participants were asked to give their views on any remaining discourse themes which had not been covered. They were also asked to review and clarify that themes already discussed and cross referenced were valid and relevant to the topic. The focus group discussion was audio recorded, transcribed and used to form the Q-set.

***Q-sort***

Seventeen Q-sorts were undertaken between March and April 2019. Q-sort participants were able to withdraw their data from the study at any time up to 2 weeks from participation. All Q-sort participants gave their consent and none withdrew after taking part (see Appendix 4, Appendix 6).

**Inclusion and Exclusion**

A diverse range of voices on the topic is under-represented in the literature, whilst social factors and the role of others are highlighted. Inclusion of a diverse group supported the aim of increasing knowledge of what is generally understood about the topic.

Therefore, a range of people were invited to take part to enable a variety of views and perspectives from people with and without experience of menopause to be seen.

Q-sort inclusion criteria specified that participants be; over the age of 18, English speaking and able to read in English sufficiently to complete consent forms.

Focus group participants were excluded, to ensure that Q-sorts were not influenced by the focus group discussion.

**Participant Characteristics**

Fifteen Q-sort participants were female, two were male. Thirteen of the female participants were white British, one was Indian British and one was black British. Both male participants were white British and aged between 28 and 35 years. Female participants were aged between 26 and 69 years. Five participants were pre-menopause, three participants were perimenopause, one participant was at menopause stage and six participants were post-menopause. Various subcategories of menopause were reported:

* Two post-menopause participants had experienced surgical menopause and were taking HRT.
* Two post-menopause participants experienced naturally occurring menopause and were not currently using HRT. Of these, one had previously tried HRT.
* Two post-menopause participants had experienced early menopause, one was using HRT the other had never used HRT.
* The current menopause participant was using HRT.

The participant sample included students (n=4), staff (n=13). Participants’ education level ranged from Level 3 (A-level or equivalent) to Level 8 (doctoral degree), education and employment backgrounds were: psychology (n=8), psychology and teaching (n=1), nursing (n=1), nursing and psychotherapy (n=2), social science (n=1), biology and teaching (n=1), art and teaching (n=2), and administration (n=1).

**Procedure**

The participants responded to poster advertisements and contacted the researcher by email to express interest in taking part. The researcher contacted them by return email, checked eligibility and provided electronic participant information sheets, including sources of information and support, for participants to consider for a minimum of 24 hours. Participants were asked to contact the researcher if, after considering the information, they opted to take part. The researcher arranged to meet with participants individually at the University to complete consent (Appendix 4) and conduct the Q-sort.

The scale cards and example Q-grid were set out by the researcher. The participants were then given the Q-set of 80 individual statement cards. Verbal instructions on completing the sort were given to participants. Guided by the example distribution grid, participants were asked to sort the statements, from least relevant to most relevant, to reflect their own view. Participants sorted and ranked the statements using the scale provided, adhering to the forced choice distribution. Participants placed one statement in each box of the distribution grid. Participants were invited to comment on their chosen ranking of statements throughout the sort process. Comments were recorded in note form by the researcher (Appendix 7). The time taken to complete the Q-sort ranged from 20 - 45 minutes. Following completed sorts, demographic information was gathered by the researcher and participants were asked post sort questions:

* How relevant is this research topic in your opinion?
* Is there anything not captured by the statements that you would add?

Additional copies of information on sources of support were provided at the end of the meeting.

**Confidentiality**

To protect anonymity of participants, each was given an individual number. Participants were made aware that their data and extracts of their interviews would be used in the write up. Participants provided verbal and written consent and re-read the participant information sheet before participation commenced. Focus group participants were made aware that the session would be audio recorded and transcribed and gave their verbal and written consent. Audio recordings were securely deleted following transcription. The transcript was stored securely in electronic format using encryption.

**Results**

**Data Analysis**

The 17 Q-sorts were analysed using Ken-Q software (Banasick, 2018) and Ken-Q user manuals, in conjunction with Q-methodology guidance (Watts & Stenner, 2012). Factors were interpreted using ideal factor arrays and participant comments during Q-sorts and responses to post sort questions. Interpretation of factors was checked by a second rater (a trainee clinical psychologist) and a third rater (a clinical psychologist).

**Correlation matrix**

Levels of agreement in the ranking of statements by participants in Q-sorts were checked using a correlation matrix of coefficients (see Table 1).

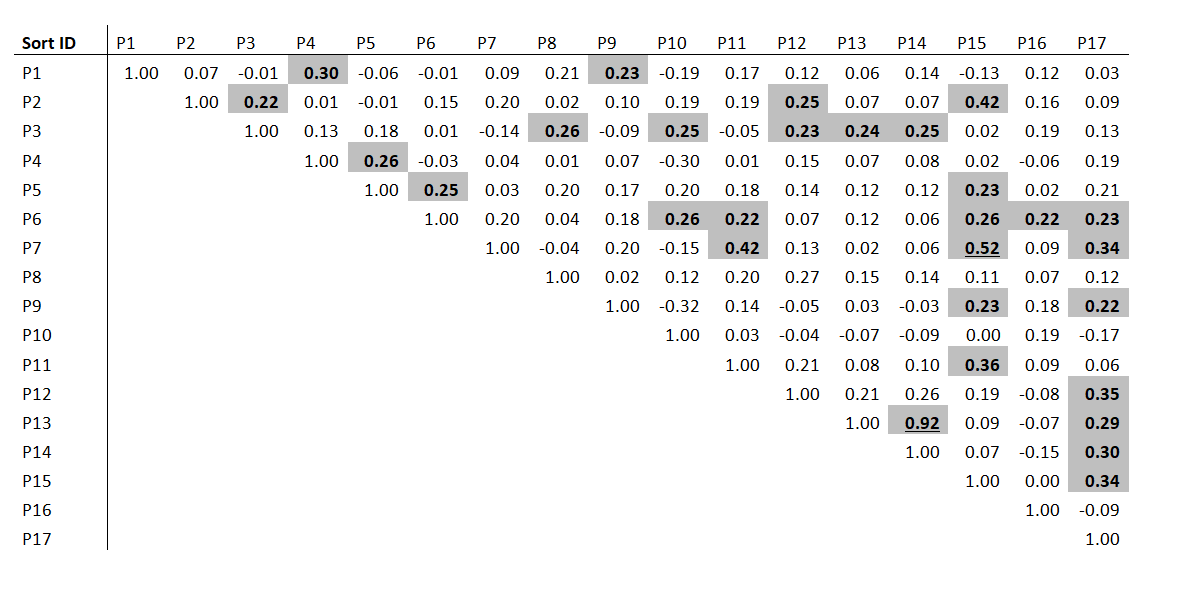


Table 1 - correlation matrix

**Significant correlations are highlighted and in bold, strong correlations (r =≥.50, Cohen, 1998) are underlined.**

Table 1 illustrates that 15 participant’s sorts correlated significantly with at least one other participant’s sorts. There were varying degrees of association in viewpoints.

**Factor analysis**

Principal components analysis was used to investigate the number of potential factors in the data set. Eigenvalues were produced for eight factors and the percentages of explained variance which indicate the strength of power of a factor (see figure 2).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Potential Factors** | | | | | | |  |
|  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| **Eigenvalues** | 3.172744 | 2.080317 | 1.895034 | 1.459876 | 1.230003 | 1.193814 | 1.064139 | 0.873238 |
| **% Explained Variance** | 19 | 12 | 11 | 9 | 7 | 7 | 6 | 5 |

Figure 2: Principal component analysis (PCA)

Inclusion of factors which have eigenvalues of one or above is recommended for further analysis and interpretation (Watts & Stenner, 2012). Figure 3 shows that factors 1-7 have eigenvalues of one or above, which suggests a seven factor model. Humphrey’s rule (which states a factor is significant if the cross-product of its two highest loadings exceeds twice the standard error) was applied to each of the seven potential factors. Factors 1,2,3, 4 and 5 were accepted for extraction from the data set, due to the cross-product of the highest loadings exceeding twice the standard error of 0.11 (1÷ (√80) = 0.11). Eigenvalues for factors 1 (3.17), 2 (2.08) and 3 (1.90) were much greater than 1, eigenvalues for factors 4 (1.46) and 5 (1.23) were much closer to 1. Factor 5 consisted of one significant loading. It represented the view of a participant who reported severe difficulties during menopause. In Q methodology participants are the variables, applied factor extraction criteria (eigenvalue and Humphrey’s rule) were met and inclusion of this voice was considered relevant. This five factor model explained 58% of the total study variance.

Varimax rotation was applied to the five extracted factors. Figure 3 shows the loadings of each Q-sort and the percentage of explained variance for each of the five factors. Ken-Q software automatically flagged significant factor loadings for each Q-sort. Figure 3 shows the explained percentages of variance of each factor following varimax rotation.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Q-sort** | **Factor 1** | **Factor 2** | **Factor 3** | **Factor 4** | **Factor 5** |
| 1 | 0.0303 | 0.0851 | 0.7008 | 0.4059 | -0.2541 |
| 2 | 0.5315 | 0.1223 | -0.1406 | 0.3441 | -0.119 |
| 3 | -0.1426 | 0.3491 | -0.1469 | 0.5751 | 0.248 |
| 4 | -0.1513 | 0.1052 | 0.6127 | 0.0367 | 0.4061 |
| 5 | 0.0686 | 0.056 | 0.0259 | 0.154 | 0.8343 |
| 6 | 0.4476 | -0.0283 | -0.1564 | 0.165 | 0.3828 |
| 7 | 0.7722 | 0.0351 | 0.1737 | -0.1787 | -0.0262 |
| 8 | 0.0128 | 0.2377 | 0.121 | 0.5287 | 0.1593 |
| 9 | 0.3609 | -0.1354 | 0.5241 | -0.0106 | 0.1572 |
| 10 | 0.0109 | -0.1245 | -0.6871 | 0.4825 | 0.167 |
| 11 | 0.6149 | 0.0637 | 0.1268 | 0.1935 | -0.0151 |
| 12 | 0.2085 | 0.4665 | 0.1095 | 0.2051 | 0.1604 |
| 13 | 0.0365 | 0.8891 | -0.0153 | 0.0292 | 0.0056 |
| 14 | 0.0289 | 0.9245 | 0.0221 | 0.017 | -0.0288 |
| 15 | 0.7705 | 0.105 | -0.0796 | -0.0939 | 0.2608 |
| 16 | 0.2122 | -0.286 | 0.0318 | 0.6031 | -0.0798 |
| 17 | 0.3424 | 0.4199 | 0.2008 | -0.1869 | 0.4313 |
| **Explained % of variance** | **14** | **14** | **11** | **10** | **9** |

*\*Significant loadings flagged by Ken-Q software are indicated in Figure 4 above by shaded grey boxes.*

Figure 3: Rotated factor loadings for each Q-sort on Factors 1-5.

**Factor Interpretation**

Idealised factor arrays were created for the five factors (Appendix 10). Qualitative and demographic information gathered from participants at data collection was used to assist with additional interpretation of factors (see Appendix 11). The five factors identified for analysis and interpretation were:

1. Going it alone

2. Resilience and reaching out.

3. External solutions and treatment

4. Resources, knowledge and proactivity

5. Support, validation, empathy

**Consensus statements**

Five of the 80 statements in the Q-set were consensual (see Table 2), with no significant difference (p<.05) across the five factors between participants who loaded onto each. For three of the five consensual statements there was no statistically significant difference (p<0.01) between any pair of factors.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Significance | Statement | Statement Number | factor1 | factor2 Q-SV | factor3 Q-SV | factor4 Q-SV | factor5 Q-SV |
|  | Believing that something can help | 13 | 1 | 2 | 2 | 0 | 0 |
| \* | Making lifestyle adjustments | 26 | -2 | -2 | 0 | 0 | 0 |
|  | Secrecy around the topic | 61 | -4 | -3 | -5 | -1 | -1 |
| \* | Confidence in physical appearance | 71 | 1 | 0 | 1 | 2 | 3 |
| \* | Coping with additional life stage factors | 78 | -2 | -1 | -1 | -1 | -1 |

Table 2: Consensus of statements

The consensus statements in Table 2 show that making lifestyle adjustments (26, F1 -2, F2 -2, F3 0, F4 0, F5 0), secrecy around the topic (61, F1 -4, F2 -3, F3 -5, F4 -1, F5 -1), and coping with additional life-stage factors (78, F1 -2, F2 -1, F3 -1, F4 -1, F5 -1) were rated as being less relevant to psychological well-being in menopause across the study sample. All viewpoints saw believing that something can help (13, F1 1, F2 2, F3 2, F4 0, F5 0) and confidence in physical appearance (71, F1 1, F2 0, F3 1, F4 2, F5 3) as having an agreed degree of relevance. Idealised factor arrays (Appendix 10) and a table of distinguishing and consensus statements (Appendix 12) were produced by Ken-Q software.

*Factor 1- Going it alone*

Factor one had an eigenvalue of 3.17 and explained 14% of the model variance. Five participants loaded significantly onto this factor, four females (three perimenopause, one pre-menopause) and one male.

This viewpoint focused on functioning and performance, control, cognitive, psychological and emotional symptoms, physical symptoms, sleep, support, talking to and hearing experiences of others and taking steps to improve well-being. Participants who loaded significantly onto this factor ranked being able to function day to day (7 +7), feeling able to perform well at work (6 +3) and being able to carry on as before (11 +2) as important. This view emphasised that knowing that cognitive changes are not due to a brain condition (49 +6), experiencing problems with thinking clearly (48 +6), experiencing memory problems (47 +5) and recognising changes as menopause (3 +2) as relevant. Coping with psychological symptoms (9 +5), experiencing emotional changes (50 +4), being able to manage emotions (4 +4), anxiety (35 +4), depression (14 +2), and experiencing feelings of dread (14 +2), hopelessness (16 +2), loss (19 +1) and distress or suffering (51 +2) were statements ranked by those with this viewpoint. Statements related to physical symptoms identified by this viewpoint included experiencing disturbed sleep (38 +5), coping with physical symptoms (8 +4), experiencing migraines (37 +3) predictability of symptoms (45 +1) and feeling unwell (42 +1). This viewpoint considered feeling in control (5 +3), practising self-care (25 +3), accepting the experience (27 +2), using humour to cope (31 +2), believing that something can help (13 +1), having a positive outlook (23 +1) and physical exercise (24 +1) as being of relevance within the sort condition. This viewpoint ranked support from partner (54 +3), feeling able to talk about it to others (60 +2), hearing about the experiences of others (12 +1) and being taken seriously (10 +1) as more important statements within the Q-set. Confidence in physical appearance (71 +1) and seeing menopause as an abnormal state (74 +1) were ranked as important in the matrix by participants from within this factor.

Distinguishing statements

Statements in factor one which were ranked significantly differently from those within other factors included experiencing memory problems (\*\*47 +5) (\*\*p<0.01), knowing cognitive changes are not due to a brain condition (\*\*49 +6), experiencing feelings of hopelessness (\*16 +2) (\*p<0.05) and feelings of distress or suffering (\*51 +2). Least relevant distinguishing statements were identified as: support from healthcare professionals (\*57 -3), social attitudes to ageing (\*\*68 -4) and feeling free from menstruation (\*\*76 – 7).

*Factor 2 – Resilience and reaching out.*

This factor had an eigenvalue of 2.08 and explained 14% of the model variance when rotated. Three female participants loaded significantly onto this factor, two were post-menopause, and one was pre-menopause. This viewpoint represented the individuals who valued coping, functioning, keeping going and feeling supported. Recognising changes as menopause (3 +2), experiencing emotional changes (50 +2) and managing emotions (4 +2) coping with physical (8 +3) and psychological (9 +2) symptoms, managing weight (40 +2), taking HRT (33 +4) and knowing what help is available (21 +1) were prioritised. In relation to functioning, specific statements which were ranked as important included: being able to function day to day (7 +3), taking part in enjoyable activities (29 +4), practising self-care (25 +1) and feeling different from before (20 +1). This viewpoint saw the role of others as important and identified support from partner (54 +2), at work (55 +4), family and friends (56 +6) as important. Being taken seriously (10 +1), hearing about others’ experiences (12 +1) and attitudes of other women (66 +1) were relevant to them. Seeing menopause as a new life stage was also ranked as important (75 +1) as was sexual desire and sensation (59 +1), and this view saw problems with thinking clearly (48 +2), disturbed sleep (38 +1) and hot flushes (39 +1) as meaningful.

Distinguishing statements

Statements which significantly defined this factor included feeling free from menstruation (\*76 +7), feeling able to perform well at work (\*\*6 +6), having support from family and friends (\*56 +6), having a positive outlook (\*23 +5), talking to other menopausal women (\*\*28 +5), using humour to cope (\*31 +5), not giving in to symptoms \*(30 +4), attitudes of men (\*67 +3), others making jokes about symptoms (\*\*63 +3), empathy from others (\*\*64 +3). Distinguishing statements which were less important included support from healthcare professionals (\*57 -5), social attitudes to women (\*\*69 -5), being able to hide symptoms (\*\*80 -6), social attitudes to ageing (\*\*68 -6) and seeing menopause as an abnormal state (\*\*74 -7).

*Factor 3 – External solutions and treatment*

Factor three had an eigenvalue of 1.90 and explained 11% of the total study variance. Four participants loaded significantly onto this factor; one male and three females. Of the female participants, two had experienced surgically induced menopause, one was currently at menopause stage. All three female participants were currently taking HRT. Factor three represents a viewpoint which places importance on physical and cognitive symptoms, functioning, healthcare and treatment, support from others, social attitudes and emotions.

Many statements ranked as higher in importance within this viewpoint related to coping generally with physical symptoms (8 +4), and with specific symptoms, including: hot flushes (39 +6), problems with memory (47 +1) and thinking clearly (48 +6), disturbed sleep (38 +5), pain (41 +4) and migraines (37 +2).

Being able to function day to day (7 +2), having support at work 55 +1), feeling able to perform well (6 +3) and reasonable adjustments (77 +3) were rated as important. This viewpoint highlighted the role of others and ~~of~~ social factors. The visibility of symptoms to others (46 +2), being taken seriously (10 +2) and social attitudes to ageing (68 +3) were considered important within this view. Healthcare and treatment was also seen as pertinent; that support from healthcare professionals (57 +3), taking HRT (33 +5) and having alternatives (34 +1) were highly rated. This viewpoint was interested in knowing what help is available (21 +1) and seeking it (22 +3). Experience of emotional changes (50 +1) and feelings of failure (18 +1), embarrassment (17 +2) and dread (14 +1) were rated as high in relevance, coping using humour (31 +1) and taking part in enjoyable activities (29 +2) were also valued.

Distinguishing statements

Statements which defined this factor included feeling free from menstruation (\*76 +7), experiencing hot flushes (\*39 +6), bladder and bowel changes (\*43 +4) and managing weight (40 +5). Duration of menopause stages (\*\*44 +4) and coping with medication side effects (\*\*36 +3) were also ranked high in importance. Less important distinguishing features of this view included recognising changes as menopause (\*\*3 -2), accepting the experience (\*27 -5), seeing menopause as a natural process (\*72 -4) and practising self-care (\*25 -3). Whilst experiencing emotional changes was considered important, being able to manage emotions was seen as less so (\*\*4 -1).

*Factor 4 – Resources, knowledge and proactivity*

Three female participants loaded significantly onto this factor; two were pre-menopause, one had experienced early menopause and was talking HRT. Factor four had an eigenvalue of 1.46 and explained 10% of the study variance.

This viewpoint identified physical and psychological symptoms, treatment, support, dialogue about menopause, social attitudes and perceptions of menopause as areas of most importance.

Coping with physical symptoms (8 +7) was most highly rated. Specific symptoms included experiencing pain (41 +2), disturbed sleep (38 +2) and bladder/bowel changes (43 +1), and feeling free from menstruation (76 +2). Recognising changes as menopause (3 +2), coping with psychological symptoms (9 +3) and experiencing emotional changes (50 +3) were considered important. Sexual desire and sensation (59 +3) and maintaining sexual relationships (58 +5) were ranked highly by this viewpoint. Support from a partner (54 +5), family and friends (56 +2) and healthcare professionals (57 +1) were prioritised. Talking to other menopausal women (28 +1), acceptance (27 +1), exercise (24 +3) and undertaking enjoyable activities (29 +2) ranked as important action related statements. Social attitudes to ageing (68 +1), perceived loss of youth (53 +1) and social attitudes to women (69 +3) were highlighted, as were seeing menopause as an abnormal state (74 +1) and a significant milestone (73 +1).

Distinguishing statements

Factor four was characterised as different from other factors in relation to concerns around HRT (\*\*32 +6), having support from a partner (\*\*54 +5), feeling able to talk to others (\*60 +5) and loss of fertility (52 +3). Distinguishing statements ranked as less important related to feelings of embarrassment (\*\*17 -7) and fear (\*\*19 -5), using humour to cope (\*\*31 -5) and feeling able to perform well at work (\*\*6 -6).

*Factor 5 – Support, validation and empathy*

This factor had an eigenvalue of 1.23 and explained 9% of the total study variance. One post-menopause participant loaded significantly onto this factor. The inclusion of this factor with one significant loading was considered important, because it represented the view of a participant who reported severe difficulties during menopause. Participants are the variables in Q methodology and criteria for factor extraction were met (eigenvalue and Humphrey’s rule).

This viewpoint highlighted emotions, physical and cognitive symptoms, attitudes and responses of others, and support and work related statements as important.

Feelings of loss (19 +7), distress or suffering (51 +6), control (5 +4), fear (15 +1), embarrassment (17 +1), failure(18 +1), managing emotions (4 +4) and experiencing anxiety (35 +1) were ranked as high in importance. Social attitudes to women (69 +3) and ageing (68 +1), attitudes of other women (66 +3), responses of others (62 +1) and being taken seriously (10 +6) were highlighted by this viewpoint. Support from healthcare professionals (57 +3), family and friends (56 +2), feeling able to talk to others (60 +1), support at work (55 +1) and reasonable adjustments were focused upon. Hot flushes (39 +4) were identified as a key relevant symptom. Recognising changes as menopause (3 +5) and knowing that cognitive changes were not indicative of another condition (49 +1) were also identified. Coping related statements included undertaking enjoyable activities (29 +1), physical exercise (24 +2), use of humour (31 +1) and having a positive outlook (23 +2). Feeling free from menstruation (76 +2), different from before (20 +2) and seeing menopause as a new life stage (75 +3) were ranked highly. Alternative treatments to HRT were also important (34 +2).

Distinguishing statements

Statements which significantly defined this factor were: experiencing feelings of loss (\*\*19 +7)) and feelings of distress or suffering (\*\*51 +6), being taken seriously (\*\*10 +6) and perceived loss of youth (\*53 +6). Feeling prepared for the onset of symptoms (\*\*2 7) was ranked lowest in importance by this viewpoint and significantly distinguished this factor.

**Discussion**

This study aimed to investigate different views of what is relevant to psychological well-being in menopause. It found five factors emerged from the data. Factor 1 consisted of all perimenopausal participants and one man. Surgical post-menopause and current menopause participants loaded on factor 3, indicating similarity in viewpoints between these participants. Post-menopause (naturally occurring) loaded onto two different factors (2 and 5), as did post-menopause (early) (2 and 4). There were areas of similarity and variation in views around what is relevant to psychological well-being, beyond classification of post-menopause type and stage. Pre-menopause participants loaded across four of the five factors, showing a range of difference in viewpoints on the topic. Males loaded onto two separate factors, indicating variability in views from a male perspective.

There was variability across individuals in their view of psychological well-being, alongside consistencies between some participants. Some of this variation and consistency was perhaps influenced by menopause stage and some by the aetiology and experience of menopause. Comparison of the factors was supportive of some of the findings within existing literature about physiological, psychological and social factors that contribute to psychological well-being. The factors identified within this study based on the responses of this sample are unlikely to represent a totality of possible factors and viewpoints on the topic. The findings offer a basis for further exploration of views on psychological well-being in menopause and a contribution to the current understanding of what is understood to be relevant, and by whom.

The five factors which emerged from within the Q sorts represented:

*Going it alone*

This represented the viewpoint of perimenopausal women and that of one male and one pre-menopausal woman. From this perspective, psychological well-being is predominantly influenced by emotional, psychological and cognitive aspects, along with some physical symptoms and challenges of continuing to function in their presence. Previous research has found that perimenopausal women are at increased risk of depression compared to women in other menopause stages (Cohen, et al, 2006). Support from others was not highly ranked overall by this viewpoint, which focused more on individual management and being able to carry on as before. Isolation and lack of support may lead to increased risk or maintenance of depression and other mental health difficulties. Raising awareness of the different viewpoints of perimenopausal women within this study can contribute to assessment of possible support, intervention and treatment targets for women at this stage. The male and premenopausal participant who loaded onto this factor may represent a viewpoint which reflects a social narrative around emotional difficulty and menopause.

*Resilience and reaching out*

This represented the viewpoint of two post-menopausal women who were not using HRT and the viewpoint of one premenopausal woman. This view sees psychological well-being as being primarily influenced by personal, social and professional support, sharing of experiences and knowledge of available help. Physical and psychological symptoms were seen as being of similar relevance within this viewpoint. Those with this view see functioning, performing well and carrying on as before as important as well as taking active steps to bolster well-being. People within this factor prioritise relevant aspects of psychological well-being in a considerably different way to the people within factor one, which suggests variability between menopause stages. This supports the findings of other research (Brown et al, 2017; Hess et al, 2012 & and Woods et al, 2009), and adds potentially new information. The premenopausal participant who loaded onto this factor noted that her view was shaped by observing the experience of her postmenopausal mother. It is of interest within this study that other non-menopause stage participants did not load onto this factor. This could be indicative of a viewpoint which is not widely recognised. It may include valuable retrospective insights, with ‘lived experience’ qualities, into ‘coming through’ the experience of menopause. Such insights may engender hope and be helpful for women at earlier menopause stages, which research suggests may equate to greater severity of psychological well-being related difficulties (Cohen, Soares, Vitonis, Otto & Harlow, 2006).

*External solutions and treatment*

This viewpoint regards physical symptoms as highly dominant in defining what constitutes psychological well-being. It represented the views of postmenopausal participants who had experienced surgically induced menopause, the view of the menopause stage participant and the view of one male participant. This viewpoint sees psychological and emotional symptoms as being relevant, though to a lesser degree than physical symptoms, treatment and healthcare support. This view sees a role for others and values attention and respect for the experience. In comparison to all other factors, this viewpoint prioritised the least statements which related to individual outlook or attitude or to taking active, self-helping steps. This view suggests that external solutions such as support from professionals and treatment for problematic physical symptoms are key to psychological well-being and represents a perspective of participants who use HRT, with some variance in menopause occurrence. Existing research suggests that following surgery that induces menopause, depressive symptoms can reduce (Shifren & Avis, 2007). HRT is commonly initiated following surgery and the precise impact of HRT on reported mood improvements is unclear (Rohl, et al, 2008). Depression was not identified as relevant within this factor. Important psychological and emotional statements focused on cognitive aspects and feelings of failure, embarrassment and dread. Visibility of symptoms to others was identified as more relevant within this view than within other factors. This viewpoint suggests similarity in views on psychological well-being in women who have experienced surgical menopause and use HRT. As there is just one participant represented by this viewpoint (and within the study) who reported current menopause stage, demographic similarity or variability cannot be inferred. This viewpoint offers additional insights relating to differences in experiences between women. Generalisations about HRT cannot be inferred from this viewpoint, as not all participants who reported using HRT loaded onto this factor. This suggests complexity and the presence of other variables. The male participant who loaded onto this factor reported having limited knowledge and completed the Q-sort to reflect a view constructed by what he described as “limited exposure” to the discourse.

*Resources, knowledge and proactivity*

This factor represents the viewpoint of two premenopausal women and one postmenopausal (early menopause) woman who was using HRT. A combination of physical, emotional and psychological aspects was highlighted as relevant. This viewpoint emphasised the role of others in the context of relationships, support, attitudes and conversations about menopause. Knowledge of available help, seeking it out and treatment-based support and information are of importance within this view. This view regards taking proactive and self-caring steps as very relevant and suggests a role for the individual in coping, acceptance and positive framing of menopause.

*Support, validation and empathy*

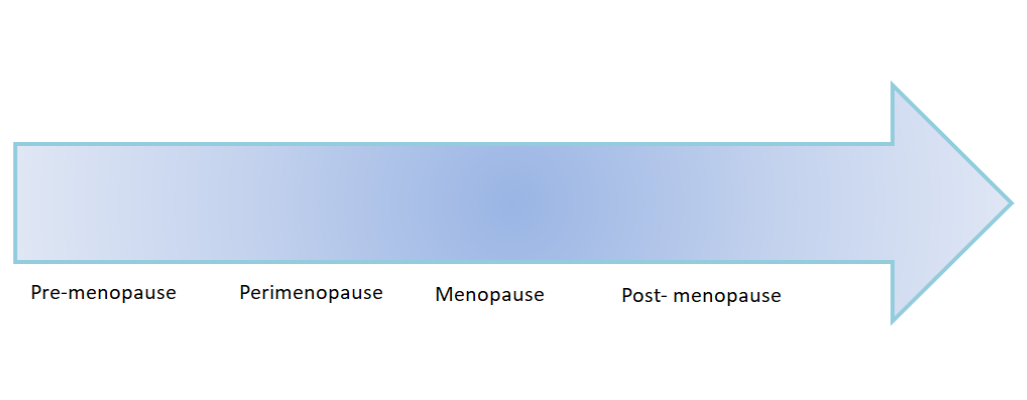
This viewpoint represents the view of one post-menopausal woman who was not using HRT and highlights that psychological and emotional aspects are highly influential for psychological well-being. This view focused to a greater extent than other viewpoints on attitudes of others. From this person’s perspective, support at work, from family and friends and healthcare professional was valued. Physical aspects were comparatively less relevant and physical symptoms were not linked to psychological or emotional difficulties within this factor. This viewpoint was unique from other post-menopausal women in the study and interpretation of this factor included qualitative information provided during the sort. This view represents a menopause experience characterised by distress and experiences of invalidation and lack of understanding, particularly in the work place. An experience of menopause which led to non- attendance at work, extended leave and non-disclosure of menopause as the cause of absence was described. Findings of polls and research (BBC Menopause Survey, 2018, Burton, Pransky, Conti & Edington 2004, DoE 2017) which reports work related performance, disclosure and support issues in relation to menopause were supported within this view. A sole loading onto this factor may also reflect some estimated percentages of women who experience extreme difficulties as being a minority (Burton, Pransky, Conti & Edington 2004, DoE 2017), though other estimates suggest significant difficulties may be much more common (Nuffield, 2014).

This viewpoint is of interest and arguably highly relevant in broadening understanding of how difficulties in relation to psychological well-being may be experienced. Attitudes and responses of others are highlighted to a greater degree than within other viewpoints, along with considerable emphasis on emotional and psychological aspects.

*A model for understanding psychological well-being in menopause*

Viewpoints which contained more statements related to social support, proactivity and agency, enjoyment, continuing in the presence of symptoms and seeking knowledge also contained lower proportions of highly ranked psychological, cognitive and physical statements. What is relevant may be influenced to some degree by menopause stage and experience.

Based on the findings of this research, a model for understanding psychological well-being in menopause is proposed (Figure 4).



Process of Menopause

Functioning

Control

Knowing what is happening

Thinking and memory problems

Emotions

Sleep

Knowledge

Education

Extended to wider non-menopause population.

Coping

Functioning

Support

Empathy

Positive Outlook

Talking to other women

Physical symptoms

Treatment

Emotions

Thinking problems

Support

Social attitudes

**Instances of significant Difficulties:**

Emotions Physical symptoms Cognitive symptoms

Loss Support Attitudes of others

Validation Empathy

Figure 4: Proposed model for understanding what is relevant to psychological well-being across the stages of menopause.

At pre-menopause stage, knowledge about the range of physical, emotional, psychological and cognitive changes which may be experienced from perimenopause stage onwards is important.

At perimenopause, emotional, cognitive and psychological aspects and the impact of these on functioning are more relevant than for women at other menopause stages. Talking about menopause and hearing the experiences of others is important.

At menopause (naturally occurring and surgically induced), cognitive and physical symptoms, treatment and health profession support are more relevant. Attitudes of others towards ageing and symptoms are important. Flexibility, support and performance at work are relevant to women at this stage.

At post-menopause stage, professional, social and relational support is important and talking to other women is more valued. Cognitive, physical and emotional aspects are also important (to a lesser degree than at menopause and perimenopause). Positivity, enjoyment, seeking out knowledge, using humour and not giving in are relevant to women at this stage.

In the experience of significant difficulties, feelings of loss and distress and being able to recognise menopause may be relevant. The responses of others, being taken seriously and attitudes to women and ageing may also be particularly relevant.

A consensus understanding of what is relevant to psychological well-being in menopause is not apparent amongst participants without experience of menopause. This suggests that parts of the discourse around psychological well-being in menopause may be more prominent than others and exposure to this is likely subject to variance. This may indicate an absence of comprehensive understanding within society and highlight a need for improved education.

The aims of this study were to explore a range of perspectives about what is relevant to psychological well-being in menopause, using Q-methodology. The study aimed to add to existing knowledge about psychological well-being and improve information, education and targets for support and intervention.

During the course of the study a broad range of validated statements on the topic has been generated and the perspectives of a range of people have been explored and compared. Similarity and variability has been observed and interpreted and, drawing on this, a model for understanding psychological well-being in menopause has been proposed. Differences in perspectives at different stages of menopause have emerged, adding to existing knowledge about possible needs and targets of support during the course of menopause. Inconsistencies in the perspectives of people without experience of menopause have been explored and a need for improved education has been highlighted.

**Clinical Implications**

Findings of this study are of relevance to healthcare professionals, to women across stages of menopause, to partners, families and social networks of women, and to society generally.

There is a role for clinical psychology in developing improved education materials and social awareness around psychological well-being in menopause, as a factor in the broader context of women’s mental health at mid-life.

Menopause difficulties ‘being taken seriously’ was relevant to most viewpoints which represented postmenopausal woman in the study (except one). Given statistics which identify a spike in suicide rates for women in mid-life, women feeling able to talk about menopause and difficulties being taken seriously by others is of great importance. There is a role for clinical psychology in normalising broad variation in menopause experiences and in making contributions in areas such as the development of employment policy.

Other systemic approaches to intervention may be informed by the findings of this study. Talking to other women was ranked as more relevant by viewpoints that highlighted fewer psychological, emotional and physical symptoms. This suggests a need for facilitation of connection, communication and sharing of experiences. Increase of accessible forums and platforms may support this process and could improve availability of peer support, in arenas run by women, for women, with collective expertise through experience. There is a role for clinical psychologists in assisting with development and promotion of peer support. This could also help to address coping strategies of isolation and avoidance, which some women adopt to manage menopause difficulties, and which may be detrimental to psychological well-being and increase depression risks (NHS, 2018).

Psychological well-being in menopause is of further clinical relevance in assessment, formulation and intervention for women in contact with mental health services during mid-life. Whilst experiences of menopause can vary greatly, knowledge of potential difficulties during menopause stages is an important consideration. This may enable more psychologically informed understandings of menopause difficulties and provide alternatives to diagnostic interpretations of life course changes.

**Limitations**

The findings of this study may not be generalizable; a larger sample may have provided alternative insights and different factors may have emerged. Some Q research recommends use of a participant to statement ratio.

The study used self-reported menopause categories, and recognising changes as menopause was identified as a relevant to psychological well-being. It is therefore possible that reports of menopause stage may not be accurate, particularly between pre-menopause and perimenopause. Some participants’ sorts may not reflect awareness of personal experience of difficulties which may be menopause related though may not be reported as relevant in that context. Conversely, some participants’ sorts may reflect understanding of personal experiences which are attributed to menopause but unrelated. This may compromise clear interpretation of sorts and loadings onto factors by menopause stage.

The study was advertised within the university and several participants had backgrounds in psychology and may be more attuned to factors which impact well-being.

Viewpoints of males and of menopausal women were less represented within this study. As a women’s issue, the topic of menopause may not seem relevant to males and the influence of social attitudes may make participation unappealing. ‘Attitudes of men’ was a relevant statement within factor 2; the topic may benefit from more exploration of male viewpoints.

Menopause stage, defined as 12 months from the final menstrual period, may be a narrow margin within which to capture viewpoints.

Individual difference variables which may also be influential and other mid-life factors or history of psychological well-being prior to menopause were not explored within this study.

**Conclusion**

Q- methodology was used with seventeen participants. Principal component analysis was used to identify five factors that suggested differences in viewpoints on what is relevant to psychological well-being. Similarities and differences in the perspectives of the factors supported some existing research findings and provided additional insights worthy of consideration in increasing awareness and knowledge of the topic and in informing approaches to care and intervention. Based on the findings, a model of understanding psychological well-being in menopause was proposed.

Interpretation of factors suggested that there is broad variability in the viewpoints of people without personal experience of menopause and some similarities between women with experience of menopause. Perimenopausal women focused more on psychological and emotional aspects, post-surgical and menopausal women focused more on physical aspects and treatment. For some postmenopausal women the primary focus was on support, proactivity and resilience, for others the focus was on psychological and emotional aspects and attitudes and responses of others. The study upheld findings of previous research that psychological well-being is affected to varying degrees by a range of social, emotional, psychological and physiological factors and that difficulties are more strongly associated with earlier stages of menopause. A role for clinical psychology in improving education and support and increasing awareness of psychological well-being in menopause was considered.

**Originality**

To the author’s knowledge, at the time of this study, the literature included no other Q methodology studies which include views from the perspective of people without menopause experience. Given the role of social factors and responses of others which is indicated in the literature, this is an important area of exploration, if knowledge of what is not well understood by the systems around women, and the support they receive, is to be improved.

**Future research**

Research should include a greater sample size and broader range of participant demographics, particularly women at menopause stage and men. Additionally, individual differences and history of psychological well-being should be focused on. The proposed model of understanding psychological well-being in menopause should be further developed through research in this area. The Q set of validated statements should be considered for use in future studies and with more nuanced groups.

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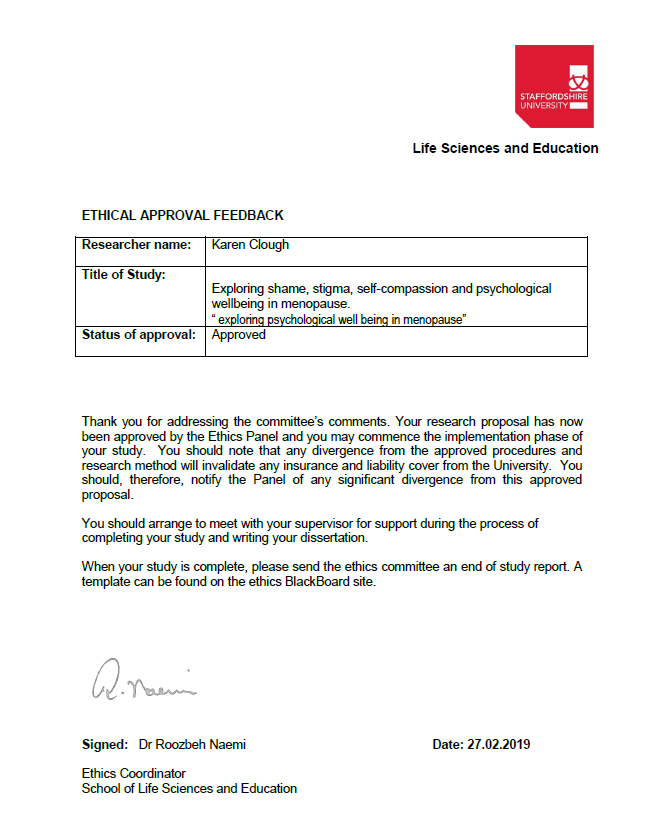
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Glossary of terms

APPENDIX 1 – Ethical Approval



APPENDIX 2 - Q-Set of 80 Statements

**Statement Statement**

**No.**

1 Prior knowledge about menopause is relevant to psychological well-being in menopause.

2. Feeling prepared for the onset of symptoms is relevant to psychological well-being in menopause

3. Recognising changes as menopause is relevant to psychological well-being in menopause

4. Being able to manage emotions is relevant to psychological well-being in menopause

5. Feeling in control is relevant to psychological well-being in menopause

6. Feeling able to perform well at work/ in role is relevant to psychological wellbeing in menopause

7. Being able to function day to day is relevant to psychological wellbeing in menopause

8. Coping with physical symptoms is relevant to psychological wellbeing in menopause

9. Coping with psychological symptoms is relevant to psychological wellbeing in menopause

10. Being taken seriously is relevant to psychological well-being in menopause

11. Being able to carry on as before is relevant to psychological well-being in menopause

12. Hearing about the experiences of others is relevant to psychological well-being in menopause

13. Believing that something can help is relevant to psychological well-being in menopause

14. Experiencing feelings of dread is relevant to psychological well-being in menopause

15. Experiencing feelings of fear is relevant to psychological well-being in menopause

16. Experiencing feelings of hopelessness is relevant to psychological well-being in menopause

17. Experiencing feelings of embarrassment is relevant to psychological well-being in menopause

18. Experiencing feelings of failure is relevant to psychological well-being in menopause

19. Experiencing feelings of loss is relevant to psychological well-being in menopause

20. Feeling different from before is relevant to psychological well-being in menopause

21. Knowing what help is available is relevant to psychological well-being in menopause

22. Seeking help is relevant to psychological well-being in menopause

23. Having a positive outlook is relevant to psychological well-being in menopause

24. Physical exercise is relevant to psychological well-being in menopause

25. Practising self-care is relevant to psychological well-being in menopause

26. Making lifestyle adjustments is relevant to psychological well-being in menopause

27. Accepting the experience is relevant to psychological well-being in menopause

28. Talking to other menopausal women is relevant to psychological well-being in menopause

29. Taking part in enjoyable activities is relevant to psychological well-being in menopause

30. Not giving in to symptoms is relevant to psychological well-being in menopause

31. Using humour to cope is relevant to psychological well-being in menopause

32. Feeling concerned about risks of HRT is relevant to psychological well-being in menopause

33. Taking HRT is relevant to psychological well-being in menopause

34. Having alternative treatments to HRT is relevant to psychological well-being in menopause

35. Anxiety is relevant to psychological well-being in menopause

36. Coping with side effects of medication is relevant to psychological well-being in menopause

37. Experiencing migraines is relevant to psychological well-being in menopause

38. Experiencing disturbed sleep is relevant to psychological well-being in menopause

39. Experiencing hot flushes is relevant to psychological well-being in menopause

40. Managing weight is relevant to psychological well-being in menopause

41. Experiencing pain is relevant to psychological well-being in menopause

42. Feeling unwell is relevant to psychological well-being in menopause

43. Experiencing bladder/bowel changes is relevant to psychological well-being in menopause

44. Duration of menopause stages is relevant to psychological well-being in menopause

45. Predictability of symptoms is relevant to psychological well-being in menopause

46. Visibility of symptoms to others is relevant to psychological well-being in menopause

47. Experiencing memory problems is relevant to psychological well-being in menopause

48. Experiencing problems with thinking clearly is relevant to psychological well-being in menopause

49. Knowing that cognitive changes are not due to a brain condition (e.g. dementia) is relevant to psychological well-being in menopause

50. Experiencing emotional changes is relevant to psychological well-being in menopause

51. Experiencing feelings of distress or suffering is relevant to psychological well-being in menopause

52. Loss of fertility is relevant to psychological well-being in menopause

53. Perceived loss of youth is relevant to psychological well-being in menopause

54. Support from partner is relevant to psychological well-being in menopause

55. Support at work is relevant to psychological well-being in menopause

56. Support from family and friends is relevant to psychological well-being in menopause

57. Support from healthcare professionals is relevant to psychological well-being in menopause

58. Maintaining sexual relationships is relevant to psychological well-being in menopause

59. Sexual desire and sensation are relevant to psychological well-being in menopause

60. Feeling able to talk about it to others is relevant to psychological well-being in menopause

61. Secrecy around the topic is relevant to psychological well-being in menopause

62. Responses of others is relevant to psychological well-being in menopause

63. Others making jokes about symptoms is relevant to psychological well-being in menopause

64. Empathy from others is relevant to psychological well-being in menopause

65. Validation from others is relevant to psychological well-being in menopause

66. Attitudes of other women are relevant to psychological well-being in menopause

67. Attitudes of men are relevant to psychological well-being in menopause

68. Social attitudes to ageing are relevant to psychological well-being in menopause

69. Social attitudes to women are relevant to psychological well-being in menopause

70. Social messages about HRT are relevant to psychological well-being in menopause

71. Confidence in physical appearance is relevant to psychological well-being in menopause

72. Seeing menopause as a natural process is relevant to psychological well-being in menopause

73. Acknowledgement of menopause as a significant milestone is relevant to psychological well-being in menopause.

74. Seeing menopause as an abnormal state is relevant to psychological well-being in menopause

75. Seeing menopause as the start of a new life stage is relevant to psychological well-being in menopause

76. Feeling free from menstruation is relevant to psychological well-being in menopause

77. Flexibility and reasonable adjustments at work are relevant to psychological wellbeing in menopause

78. Coping with additional life stage factors is relevant to psychological wellbeing in menopause

79. Depression is relevant to psychological well-being in menopause

80. Being able to hide symptoms is relevant to psychological well-being in menopause

APPENDIX 3 – Recruitment Posters



**Help us understand more about**

**Psychological Well-being in Menopause**

**We are looking for women to take part in a focus group**

* **Who have current experience of menopause**
* **Who have previous experience of menopause**

**We would like to consult women to find out more about what is important to psychological well-being in menopause.**

**Taking part in the focus group involves discussing existing ideas and themes around the topic and sharing your ideas about what you think is relevant.**

**This will help us to complete an upcoming study which aims to find out more about how experiences of menopause are understood.**

**If you are interested in taking part or would like more information, please contact:**

**Karen Clough – Researcher (Trainee Clinical Psychologist)**

**Email:** [**c025072g@student.staffs.ac.uk**](mailto:c025072g@student.staffs.ac.uk)

**Exploring Psychological Well-being in Menopause**



**Exploring Psychological Well-being in Menopause**

**Help us find out more about**

**Psychological Well-being in Menopause**

**We are looking for a range of people to take part in a research study:**

* **Women over the age of 18**
* **Men over the age of 18**

**We are looking for people to take part in a study about how psychological well-being in menopause is understood.**

**We would like to gain a range of views, from people who have or may experience menopause and from people who have not or will not experience menopause.**

**Taking part involves meeting with the researcher to select statements relating to menopause and psychological well-being which best reflect your views.**

**If you are interested in taking part in this research or would like more information, please contact:**

**Karen Clough – Researcher (Trainee Clinical Psychologist)**

**Email:** [**c025072g@student.staffs.ac.uk**](mailto:c025072g@student.staffs.ac.uk)

APPENDIX 4 – Participant Information Sheets

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**Exploring Psychological Wellbeing in Menopause**

**Focus Group - Participant Information Sheet**

I am a Trainee Clinical Psychologist in my final year of study at Staffordshire University. You are being invited to take part in a focus group which will form part of my doctoral thesis research study. Before you decide if you would like to take part, it is important for you to understand what the focus group is and what taking part in the focus group will involve. Please take time to read the information carefully and discuss it with others if you wish.

Feel free to ask questions if there is anything that is unclear or if you would like more information. You may want to read the information more than once. Please take your time to decide whether or not you would like to take part.

**What is the purpose of the focus group?**

We know that for some women the experience of menopause can cause distress and can impact on psychological well-being. We are interested to find out more about factors which may be related to this. We are interested in gaining a greater understanding of the importance of personal factors and experiences of the responses and attitudes of others. The purpose of the focus group is to discuss and identify relevant themes to include in a research study of psychological well-being and menopause. If you decide to take part in this focus group, you will help us to develop some statements about the experience of menopause which we will use in the study. You will also be asked to give your view on some themes which have been identified by the researcher within existing academic and popular literature and media sources. The study hopes to develop a better understanding of how we might help to improve psychological well-being in menopause for women and how we might increase awareness more generally.

**Why have I been invited to participate?**

You have been invited to participate because we are seeking the views of people who have experience of menopause.

**Do I have to take part?**

No. It is up to you to decide whether or not to take part. We will describe the focus group to you and you will be given this information sheet to keep. You will be able to ask the researcher any questions you might have about the focus group before you decide would like to take part. If you agree to take part, you will be asked to sign a consent form. Once you have given consent, you are free to withdraw from the focus group at any time prior to your attendance. Once you have taken part in the focus group and the session is complete, it will not be possible to withdraw your contribution to the discussion.

**What will happen to me if I take part?**

If you agree to take part you will meet with the researcher and up to 7 other women to discuss statements which may be relevant to psychological well-being in menopause. You will be asked to contribute your ideas about psychological well-being in menopause and will also be asked to comment on how relevant you feel some existing themes and ideas on the topic are. The focus group discussion will be audio-recorded by the researcher and later transcribed. Once transcribed, the audio recording will be erased. The focus group will last for approximately 90 minutes.

**Will taking part in the focus group cost me anything?**

If you agree to take part you will need to make the time to attend the focus group.

**Will my involvement in the focus group be confidential?**

The information you provide will be confidential and any details which would identify you will be stored separately from the recording and transcription of the focus group discussion. Only the researcher will have access to the audio recording of the focus group and the recording will be stored on an encrypted device. You will be given a participant number and this will be used to identify your information, which means we do not have to put your name on any information you provide. Only the researcher and university staff will have access to any information which links you to your participant number. The only exception to confidentiality is if at any point during your involvement in the focus group you tell us information which causes concern for your safety or the safety of others. If this happens we will need to share this information. Where possible we will let you know if we need to do this.

**What will happen to information collected about me during the focus group?**

GDPR stands for General Data Protection Regulation. It is a law which sets the minimum standards for processing data and safeguards your rights. Staffordshire University is the sponsor for this study based in the United Kingdom. We will be using information from you in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Staffordshire University will keep your research data for 10 years after the study has finished.

All information collected about you within the study will be securely stored in line with University Ethics and Data Protection policies. The identifiable information you provide will be accessible to the researcher for 4 weeks from the date of taking part. Your anonymous research data will be accessible to the researcher for the duration of the study and will thereafter be securely stored by the University for a period of 10 years. After this period, the information collected about you will be destroyed by the University using approved secure and confidential disposal methods - electronic data will be disposed of using the University secure IT disposal service, printed data will be disposed of using the University confidential waste scheme.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study after the end of the focus group session, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

You can find out more about how we use, store and dispose of your information here:

<http://www.staffs.ac.uk/data-protection/data-classification-handling-and-disposal-policy.jsp>

<http://www.staffs.ac.uk/data-protection/data-protection-policy.jsp>

**What are the possible advantages of taking part?**

We do not think that taking part in this focus group will benefit you directly. We hope that the focus group will help us to learn more about factors which may affect psychological well-being in menopause and that this will contribute to a research study on psychological well-being in menopause. We will offer everybody who takes part in the focus group information about sources of information and support.

**What are the possible disadvantages of taking part?**

We will ask you questions about your views and experiences which you may find personal. You can take time to answer the questions and do not have to answer any questions which you do not want to. You will be asked if you have any concerns at the end of your meeting with the researcher and will be given the opportunity to discuss them. Participation in this study may cause emotional distress and anxiety in some individuals. Information on services which can offer emotional support, should you become distressed as a result of your involvement in the study, is included at the end of this information sheet.

**What if there is a problem?**

If you have any concerns about the focus group or the upcoming study you can speak to the researcher, who will do their best to answer your questions. If you are unhappy with this this, you can speak to the research supervisor who will do their best to deal with your concerns. If you remain unhappy and would like to make a formal complaint, you can do this through the University complaint procedure.

**What will happen to the results of the study?**

The results of the study will be written up in the form of an academic doctoral thesis report by the researcher, as part of their Professional Doctorate in Clinical Psychology course. The findings of the study may be published, so that they may be shared with other academics and healthcare professionals. We will not use the names or identifiable information of any participant in any publication. Participants will be anonymised within the report. Copies of the report and any publications can be made available to you following completion of the study should you wish.

**Who is organising the research?**

The research is being organised by Staffordshire University.

**Who has approved the study?**

The focus group and study has been approved by Staffordshire University Research Ethics Committee to ensure that your rights, safety and dignity are protected.

**For further information please contact:**

**Researcher – Karen Clough** [c025072g@student.staffs.ac.uk](mailto:c025072g@student.staffs.ac.uk)

**Research Supervisor – Dr. Helen Combes** [H.A.Combes@staffs.ac.uk](mailto:H.A.Combes@staffs.ac.uk)

Thank you very much for taking the time to read this information sheet.

****

**Exploring Psychological Wellbeing in Menopause**

**Participant Information Sheet**

I am a Trainee Clinical Psychologist in my final year of study at Staffordshire University. You are being invited to take part in my doctoral thesis research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information carefully and discuss it with others if you wish.

Feel free to ask questions if there is anything that is unclear or if you would like more information. You may want to read the information more than once. Please take your time to decide whether or not you would like to take part.

**What is the purpose of the study?**

We know that for some women the experience of menopause can cause distress and can impact on psychological well-being. We are interested to find out more about factors which may be related to this. We are interested in gaining a greater understanding of the importance of personal factors and experiences of the responses and attitudes of others. If you decide to take part in this study you will help us to understand how we might be able to improve psychological well-being in menopause for women and increase awareness more generally.

**Why have I been invited to participate?**

You have been invited to participate because we are seeking a range of views on the aforementioned topic.

**Do I have to take part?**

No. It is up to you to decide whether or not to take part. We will describe the study to you and you will be given this information sheet to keep. You will be able to ask the researcher any questions you might have about the study before you decide. If you agree to take part you will be asked to sign a consent form. You are free to withdraw from the study at any time within 2 weeks of taking part in the study without giving a reason.

**What will happen to me if I take part?**

If you agree to take part you will meet with the researcher and you will be asked to give some demographic information about yourself and your background. Following this you will take part in an exercise which will involve choosing statements which best represent your views in relation to psychological wellbeing in menopause. In total this will take approximately 1 hour and 30 minutes. You will be required to meet with the researcher to take part in the study at Staffordshire University.

**Will taking part in the study cost me anything?**

If you agree to take part you will need to make the time to attend the practical exercise session described above.

**Will my involvement in this study be confidential?**

The information you provide will be confidential and any details which would identify you will be stored separately from the answers you give to questions about yourself and your background and your views within the exercise. You will be given a participant number and this will be used to identify your information, which means we do not have to put your name on information about you. Only the researcher and university staff will have access to information which links you to your participant number. The only exception to this is if at any point during your involvement in the study you tell us information which causes concern for your safety or the safety of others. If this happens we will need to share this information. Where possible we will let you know if we need to do this.

**What will happen to information collected about me during this study?**

GDPR stands for General Data Protection Regulation. It is a law which sets the minimum standards for processing data and safeguards your rights. Staffordshire University is the sponsor for this study based in the United Kingdom. We will be using information from you in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Staffordshire University will keep your research data for 10 years after the study has finished. Identifiable information you provide during the study will be kept for no more than 4 weeks from the date that you take part.

All information collected about you within the study will be securely stored in line with University Ethics and Data Protection policies. The identifiable information you provide will be accessible to the researcher for 4 weeks from the date of taking part. Your anonymous research data will be accessible to the researcher for the duration of the study and will thereafter be securely stored by the University for a period of 10 years. After this period, the information collected about you will be destroyed by the University using approved secure and confidential disposal methods - electronic data will be disposed of using the University secure IT disposal service, printed data will be disposed of using the University confidential waste scheme.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study after 2 weeks from taking part, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

You can find out more about how we use, store and dispose of your information here:

<http://www.staffs.ac.uk/data-protection/data-classification-handling-and-disposal-policy.jsp>

<http://www.staffs.ac.uk/data-protection/data-protection-policy.jsp>

**What are the possible advantages of taking part?**

We do not think that taking part in this study will benefit you directly. We hope that the findings of the study may help us to learn more about factors which may affect psychological well-being in menopause and hope that this can contribute to improved knowledge and care for others in the future. We will offer everybody who takes part information about sources of help and support.

**What are the possible disadvantages of taking part?**

We will ask you to contribute your views by sorting statements, which you may find personal. You will be asked if you have any concerns at the end of your meeting with the researcher and be given the opportunity to discuss them. Participation in this study may cause emotional distress and anxiety in some individuals. Information on services which can offer emotional support, should you become distressed as a result of your involvement in the study, is included at the end of this information sheet.

**What if there is a problem?**

If you have any concerns about the study you can speak to the researcher, who will do their best to answer your questions. If you are unhappy with this this, you can speak to the research supervisor who will do their best to deal with your concerns. If you are unhappy about the research and would like to make a formal complaint, you can do this through the University complaint procedure.

**What will happen to the results of the study?**

The results of the study will be written up in the form of an academic doctoral thesis report by the researcher, as part of their Professional Doctorate in Clinical Psychology course. The findings of the study may be published, so that they may be shared with other academics and healthcare professionals. We will not use the names or identifiable information of any participant in any publication. Participants will be anonymised within the report. Copies of the report and any publications can be made available to you following completion of the study should you wish.

**Who is organising the research?**

The research is being organised by Staffordshire University.

**Who has approved the study?**

The study has been approved the Staffordshire University Research Ethics Committee to ensure that your rights, safety and dignity are protected.

**For further information, please contact:**

**Researcher – Karen Clough** [c025072g@student.staffs.ac.uk](mailto:c025072g@student.staffs.ac.uk)

**Research Supervisor – Dr. Helen Combes** [H.A.Combes@staffs.ac.uk](mailto:H.A.Combes@staffs.ac.uk)

Thank you very much for taking the time to read this information sheet.

APPENDIX 5 – Sources of Information and Support

**Sources of Information and Support**

Should you experience distress in relation to your consideration of or involvement in this study, please find below some information about organisations who can offer information and support.

**Samaritans** – <https://www.samaritans.org/> Tel: 116 123. Email: [j@samaritans.org](mailto:j@samaritans.org)

The Samaritans offer a safe place for you to talk any time you like, in your own way – about whatever’s getting to you. 24 hours a day, 365 days a year. If you need a response immediately, it's best to call on the phone. This number is FREE to call. You don't have to be suicidal to call.

**MIND info line** – <https://www.mind.org.uk/information-support/helplines/>

Tel: 0300 123 3393 or text 86463. Lines are open 9am to 6pm, Monday to Friday (except for bank holidays). Provides information on a range of mental health topics including:

•types of mental health problems

•where to get help

•medication and alternative treatments

•advocacy.

**NHS Information** on menopause is available at: <https://www.nhs.uk/conditions/menopause/>

**The Menopause Support Network** is a social media group where women experiencing menopause can come together to support each other through this time in their lives and share what helps them. <https://www.facebook.com/groups/384849495215750/?ref=group_header>

**The Daisy Network** is a not for profit organisation which offers information and support for early menopause <https://www.daisynetwork.org.uk/>

These online menopause network resources are examples of sources which may be publicly accessed should you wish to explore this. Other similar sources also exist which you may prefer and may wish to explore independently.

These sources are independent of the study and are suggestions offered as example sources of public information and support. They are not affiliated with the University or the researcher.

APPENDIX 6 – Consent Forms

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**Exploring Psychological Wellbeing in Menopause**

Participant Consent Form – Focus Group

Researcher:

[Karen Clough – Trainee Clinical Psychologist](mailto:Karen Clough – Trainee Clinical Psychologist Email: c025072g@student.staffs.uk)

[Email: c025072g@student.staffs.uk](mailto:Karen Clough – Trainee Clinical Psychologist Email: c025072g@student.staffs.uk)

Please confirm that you have read and agree with the following statements, by initialling boxes on the right hand side of the page and signing overleaf:

I confirm that I have read and understand the focus group information sheet, version 1.0 dated December 2018, for the above study. I have had the opportunity to ask questions and these questions have been answered.

I confirm that I have had sufficient time to consider whether or not I would like to take part in the focus group.

I understand that my participation in the focus group is voluntary and that I am free to withdraw at any time prior to the completion of the focus group, without giving any reason, if I should change my mind.

I understand that topics and themes identified within the focus group will be used within the research study described in the information sheet.

I understand that my contributions to the focus group and comments I may make will remain anonymous within the study.

I agree that I am happy for the researcher to audio record the focus group, as described in the information sheet, for the purpose of transcription.

I understand that the anonymous data I provide will be included in the researcher’s doctoral thesis report, which will be published in an academic journal.

I understand that anonymous information collected during the study may be looked at by research staff from Staffordshire University and by research regulatory authorities.

I agree for my anonymous data to be used in the final study report, research publication and teaching as appropriate.

I agree to take part in the focus group.

Signature of participant ………………………………………………………………

Print Name ………………………………………………………………………………….

Date …………………………………………………………………………………………..

Signature of researcher ……………………………………………………………….

Print Name ………………………………………………………………………………….

Date …………………………………………………………………………………………….

****

**Exploring Psychological Wellbeing in Menopause**

Participant Consent Form

Researcher:

[Karen Clough – Trainee Clinical Psychologist](mailto:Karen Clough – Trainee Clinical Psychologist Email: c025072g@student.staffs.uk)

[Email: c025072g@student.staffs.uk](mailto:Karen Clough – Trainee Clinical Psychologist Email: c025072g@student.staffs.uk)

Please confirm that you have read and agree with the following statements, by initialling the boxes on the right hand side of the page and signing at the bottom:

I confirm that I have read and understand the information sheet, version 1.0 dated December 2018, for the above study. I have had the opportunity to ask questions and these questions have been answered.

I confirm that I have had sufficient time to consider whether or not I would like to take part in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time within 2 weeks of taking part in the study without giving any reason, if I should change my mind.

I understand that I will not be identified as a participant in the study and my data will remain anonymous.

I understand that anonymous information collected during the study may be looked at by research staff from Staffordshire University and by research regulatory authorities.

I understand that the data I provide within the study will be included in the researcher’s thesis report, which will be published in an academic journal. I understand that I will not be identified within the report and my data will be anonymised.

I agree for my anonymous data to be used in the final study report, research publication and teaching as appropriate.

I agree to take part in the above study.

Signature of participant ………………………………………………………………

Print Name ………………………………………………………………………………….

Date …………………………………………………………………………………………..

Signature of researcher ……………………………………………………………….

Print Name ………………………………………………………………………………….

Date …………………………………………………………………………………………….

APPENDIX 7 – Demographic and Post Sort Information

Demographic Information

|  |  |
| --- | --- |
| AGE: |  |
| GENDER: |  |
| OCCUPATION : |  |
| LEVEL OF EDUCATION : |  |
| ETHNICITY: |  |
| MENOPAUSE STATUS: |  |
|  |  |

|  |
| --- |
| How relevant is the research topic in your opinion? |
|  |
|  |
| Is there anything not captured by the statements that you would add? |
|  |
|  |
|  |

Sort process comments:

APPENDIX 8 – Open Questions Focus Group and discourse themes

**Open Questions**

What do you think of when you hear the word menopause?

What do you feel when you hear the word menopause?

What has your experience of menopause been like?

What kind of helpful responses have you had from others during menopause?

What kind of unhelpful responses have you had from others during menopause?

Can you describe any positive experiences of menopause?

Can you describe any negative experiences of menopause?

How would you describe your understanding of your experience of menopause?

How would you describe others’ understanding of your experience of menopause?

How would you describe your psychological well-being during menopause?

What do you think is important for good psychological well-being in menopause?

What do you think could negatively impact psychological well-being in menopause?

What kind of things did you need to do for yourself?

What kind of things did you need from others?

How would you describe your mental health in relation to menopause?

How relevant is psychological well-being in menopause?

APPENDIX 9 – Discourse themes for validation check

**Discourse themes – Valid or Not Valid?**

Stigma from others

Depressed mood

Anxiety

Taboo topic

Positive experience

Negative experience

Lack of understanding

Others are understanding

Sleep problems

Memory problems

Good health

Poor health

Quality of life

Positive mood

Problems with mood

Supported by others

Unsupported by others

Self - relating

Inadequate

Tolerant

Curious

Open

Part of life

Control

Ageing

Shame

Silence

Work

Relationships

Identity

Healthcare/Treatment



APPENDIX 10 – Composite Q-sorts









APPENDIX 11 – Factor Interpretations

|  |  |  |
| --- | --- | --- |
| Factor | Name | Interpretation of Factor |
| 1 | Going it alone. | Psychological and emotional factors were extremely relevant to this viewpoint. Knowledge, control, managing and coping were important. This viewpoint highlights physical symptoms of migraines, feeling unwell and disturbed sleep, along with symptom unpredictability, as relevant. The impact of these factors upon functioning was linked. It was important within this viewpoint to be supported by a partner, for the experience to be taken seriously and to know other women’s experiences. This viewpoint focused on self-care, acceptance and exercise and valued a positive outlook and a sense of humour. It was less focused on treatments or social attitudes and others. The focus was primarily on managing emotional and psychological aspects and mediating the impact of these on functioning. |
| 2 | Resilience and reaching out. | This viewpoint saw a clear role for others in terms of providing support and empathy. It valued shared experiences. Attitudes of men and other women were seen as important and this viewpoint saw a need for others to take menopause seriously. Those with this view acknowledged emotional and cognitive difficulties and problematic physical symptoms, and placed emphasis on proactivity, resilience and a positive approach. |
| 3 | External solutions and treatment. | Physical symptoms strongly shaped this viewpoint, along with cognitive and emotional factors. This viewpoint saw a role of treatment, choice and support from health professionals rather than social networks and focused little on proactive strategies or agency. Conscious of the role of others, this view emphasised attitudes and viewed visibility of symptoms as problematic. |
| 4. | Resources, knowledge and proactivity. | This viewpoint primarily saw physical symptoms as influential and viewed coping with psychological symptoms and emotional changes as less prominent. More pertinent was the role of others; relational, familial and social support was key and this viewpoint was conscious of social attitudes to ageing and to women. Talking to other menopausal women was highlighted; attitudes of other women were also noteworthy. This viewpoint valued proactive coping, help and being able to function. |
| 5. | Support, empathy and validation. | Emotional and psychological factors were prominent in this viewpoint, and high emphasis was also placed support, social attitudes and responses of others. Those with this view saw individual perspectives of menopause as important and placed value on proactive coping strategies. Physical symptoms are somewhat important and there is a role for healthcare professionals and alternative treatments in this view. |

APPENDIX 12 – Ken Q output

Unrotated factor matrix



Cumulative commonalities matrix



Factor loadings with defining sorts flagged



Free distribution



Factor scores with corresponding ranks

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Statement | No. | factor 1 | factor 1 | factor 2 | factor 2 | factor 3 | factor 3 | factor 4 | factor 4 | factor 5 | factor 5 |
|  |  | Z-score | Rank | Z-score | Rank | Z-score | Rank | Z-score | Rank | Z-score | Rank |
| Prior knowledge about menopause is relevant to psychological well-being in menopause. | 1 | -0.06 | 38 | -0.8 | 64 | -0.98 | 66 | -0.86 | 66 | -0.33 | 47 |
| Feeling prepared for the onset of symptoms is relevant to psychological well-being in menopause | 2 | -0.37 | 50 | -0.65 | 62 | -0.14 | 40 | -0.37 | 51 | -2.33 | 80 |
| Recognising changes as menopause is relevant to psychological well-being in menopause | 3 | 0.61 | 20 | 0.9 | 17 | -0.66 | 58 | 0.86 | 19 | 1.67 | 4 |
| Being able to manage emotions is relevant to psychological well-being in menopause | 4 | 1.47 | 8 | 0.87 | 18 | -0.46 | 52 | 2.07 | 2 | 1.33 | 7 |
| Feeling in control is relevant to psychological well-being in menopause | 5 | 1.26 | 11 | -0.22 | 46 | -0.17 | 43 | 0.07 | 36 | 1.33 | 8 |
| Feeling able to perform well at work/ in role is relevant to psychological wellbeing in menopause | 6 | 0.96 | 14 | 2.01 | 2 | 0.95 | 12 | -2.03 | 79 | 0 | 35 |
| Being able to function day to day is relevant to psychological wellbeing in menopause | 7 | 2.25 | 1 | 1.1 | 13 | 0.79 | 17 | 1.58 | 7 | 1.67 | 5 |
| Coping with physical symptoms is relevant to psychological wellbeing in menopause | 8 | 1.47 | 9 | 0.93 | 16 | 1.62 | 7 | 2.13 | 1 | 0.67 | 17 |
| Coping with psychological symptoms is relevant to psychological wellbeing in menopause | 9 | 1.54 | 6 | 0.8 | 19 | -1.05 | 69 | 1.03 | 12 | -0.67 | 57 |
| Being taken seriously is relevant to psychological well-being in menopause | 10 | 0.14 | 33 | 0.15 | 34 | 0.47 | 22 | -0.36 | 50 | 2 | 2 |
| Being able to carry on as before is relevant to psychological well-being in menopause | 11 | 0.54 | 24 | 1.06 | 15 | 0.2 | 31 | -0.82 | 64 | -0.33 | 48 |
| Hearing about the experiences of others is relevant to psychological well-being in menopause | 12 | 0.15 | 32 | 0.28 | 30 | -1.43 | 77 | -0.42 | 52 | -1 | 65 |
| Believing that something can help is relevant to psychological well-being in menopause | 13 | 0.44 | 27 | 0.78 | 20 | 0.69 | 18 | 0 | 39 | 0 | 36 |
| Experiencing feelings of dread is relevant to psychological well-being in menopause | 14 | 0.82 | 17 | -1.55 | 74 | 0.26 | 28 | -1.27 | 73 | -1.33 | 71 |
| Experiencing feelings of fear is relevant to psychological well-being in menopause | 15 | 0.06 | 36 | -0.5 | 57 | -0.43 | 50 | -1.77 | 77 | 0.33 | 25 |
| Experiencing feelings of hopelessness is relevant to psychological well-being in menopause | 16 | 0.6 | 21 | -0.83 | 66 | -0.28 | 45 | -0.12 | 44 | -0.67 | 58 |
| Experiencing feelings of embarrassment is relevant to psychological well-being in menopause | 17 | -0.44 | 52 | -1.05 | 69 | 0.64 | 20 | -2.54 | 80 | 0.33 | 26 |
| Experiencing feelings of failure is relevant to psychological well-being in menopause | 18 | -1.3 | 73 | -0.49 | 55 | 0 | 34 | -0.67 | 60 | 0.33 | 27 |
| Experiencing feelings of loss is relevant to psychological well-being in menopause | 19 | 0.53 | 26 | -1.49 | 73 | -1.43 | 78 | -0.27 | 47 | 2.33 | 1 |
| Feeling different from before is relevant to psychological well-being in menopause | 20 | -0.01 | 37 | 0.2 | 33 | -0.7 | 59 | -0.07 | 43 | 0.67 | 18 |
| Knowing what help is available is relevant to psychological well-being in menopause | 21 | -0.77 | 63 | 0.22 | 32 | 0.37 | 25 | 1.21 | 8 | 0 | 37 |
| Seeking help is relevant to psychological well-being in menopause | 22 | -0.98 | 70 | 0.02 | 39 | 0.92 | 13 | 0.43 | 27 | -0.33 | 49 |
| Having a positive outlook is relevant to psychological well-being in menopause | 23 | 0.36 | 28 | 1.78 | 4 | -0.24 | 44 | -0.23 | 45 | 0.67 | 19 |
| Physical exercise is relevant to psychological well-being in menopause | 24 | 0.19 | 30 | -0.43 | 52 | -0.7 | 60 | 1.07 | 11 | 0.67 | 20 |
| Practising self-care is relevant to psychological well-being in menopause | 25 | 1.25 | 12 | 0.35 | 27 | -1.05 | 70 | 1.09 | 10 | 0 | 38 |
| Making lifestyle adjustments is relevant to psychological well-being in menopause | 26 | -0.68 | 62 | -0.58 | 61 | -0.34 | 46 | -0.03 | 41 | 0 | 39 |
| Accepting the experience is relevant to psychological well-being in menopause | 27 | 0.71 | 19 | -0.27 | 48 | -1.25 | 75 | 0.1 | 34 | 0 | 40 |
| Talking to other menopausal women is relevant to psychological well-being in menopause | 28 | -0.54 | 57 | 1.66 | 5 | -1.11 | 73 | 0.31 | 30 | -0.67 | 59 |
| Taking part in enjoyable activities is relevant to psychological well-being in menopause | 29 | 0.11 | 35 | 1.24 | 9 | 0.43 | 23 | 0.93 | 17 | 0.33 | 28 |
| Not giving in to symptoms is relevant to psychological well-being in menopause | 30 | -0.68 | 61 | 1.31 | 7 | -0.53 | 53 | -0.99 | 70 | 0 | 41 |
| Using humour to cope is relevant to psychological well-being in menopause | 31 | 0.56 | 23 | 1.56 | 6 | 0.33 | 26 | -1.42 | 75 | 0.33 | 29 |
| Feeling concerned about risks of HRT is relevant to psychological well-being in menopause | 32 | -0.85 | 64 | -0.15 | 45 | -0.06 | 37 | 1.92 | 3 | -1.67 | 75 |
| Taking HRT is relevant to psychological well-being in menopause | 33 | -1.82 | 78 | 1.25 | 8 | 1.64 | 6 | 0.08 | 35 | -1.33 | 72 |
| Having alternative treatments to HRT is relevant to psychological well-being in menopause | 34 | -0.95 | 69 | -0.43 | 53 | 0.21 | 30 | -0.57 | 57 | 0.67 | 21 |
| Anxiety is relevant to psychological well-being in menopause | 35 | 1.32 | 10 | -0.08 | 43 | -0.37 | 47 | -0.95 | 68 | 0.67 | 22 |
| Coping with side effects of medication is relevant to psychological well-being in menopause | 36 | -1.49 | 75 | -0.93 | 67 | 1.09 | 11 | 0.04 | 37 | -2 | 78 |
| Experiencing migraines is relevant to psychological well-being in menopause | 37 | 1.04 | 13 | -1.13 | 71 | 0.53 | 21 | -1.92 | 78 | -2 | 79 |
| Experiencing disturbed sleep is relevant to psychological well-being in menopause | 38 | 1.95 | 4 | 0.25 | 31 | 2.01 | 4 | 0.83 | 20 | -0.33 | 50 |
| Experiencing hot flushes is relevant to psychological well-being in menopause | 39 | -0.45 | 53 | 0.41 | 26 | 2.44 | 2 | -0.3 | 48 | 1.33 | 9 |
| Managing weight is relevant to psychological well-being in menopause | 40 | -0.11 | 40 | 0.61 | 24 | 2.01 | 5 | -0.5 | 54 | 0 | 42 |
| Experiencing pain is relevant to psychological well-being in menopause | 41 | -0.28 | 45 | -1.08 | 70 | 1.26 | 10 | 0.61 | 24 | -1 | 66 |
| Feeling unwell is relevant to psychological well-being in menopause | 42 | 0.13 | 34 | -0.49 | 56 | -0.09 | 38 | -0.87 | 67 | -1 | 67 |
| Experiencing bladder/bowel changes is relevant to psychological well-being in menopause | 43 | -0.1 | 39 | -1.43 | 72 | 1.45 | 8 | 0.51 | 26 | -1.67 | 76 |
| Duration of menopause stages is relevant to psychological well-being in menopause | 44 | -0.33 | 48 | -0.45 | 54 | 1.44 | 9 | -0.67 | 61 | -0.67 | 60 |
| Predictability of symptoms is relevant to psychological well-being in menopause | 45 | 0.25 | 29 | -0.3 | 50 | -0.14 | 41 | -1.17 | 71 | -1.67 | 77 |
| Visibility of symptoms to others is relevant to psychological well-being in menopause | 46 | -0.5 | 56 | -0.76 | 63 | 0.39 | 24 | -1.26 | 72 | -0.33 | 51 |
| Experiencing memory problems is relevant to psychological well-being in menopause | 47 | 1.68 | 5 | -0.09 | 44 | 0.2 | 32 | -0.82 | 65 | -0.67 | 61 |
| Experiencing problems with thinking clearly is relevant to psychological well-being in menopause | 48 | 2.22 | 2 | 0.63 | 23 | 2.27 | 3 | -0.25 | 46 | 0 | 43 |
| Knowing that cognitive changes are not due to a brain condition (e.g. dementia) is relevant to psychological well-being in menopause | 49 | 2.13 | 3 | -0.8 | 65 | 0.67 | 19 | -0.52 | 55 | 0.33 | 30 |
| Experiencing emotional changes is relevant to psychological well-being in menopause | 50 | 1.51 | 7 | 0.71 | 22 | 0.33 | 27 | 1.03 | 13 | -0.33 | 52 |
| Experiencing feelings of distress or suffering is relevant to psychological well-being in menopause | 51 | 0.58 | 22 | -0.55 | 58 | -0.11 | 39 | -0.34 | 49 | 2 | 3 |
| Loss of fertility is relevant to psychological well-being in menopause | 52 | -1.95 | 79 | -1.65 | 76 | -1.82 | 80 | 1.02 | 14 | -1.33 | 73 |
| Perceived loss of youth is relevant to psychological well-being in menopause | 53 | -0.5 | 55 | -0.55 | 59 | -0.43 | 51 | 0.29 | 31 | 1.33 | 10 |
| Support from partner is relevant to psychological well-being in menopause | 54 | 0.85 | 15 | 0.76 | 21 | -0.71 | 61 | 1.79 | 4 | 0 | 44 |
| Support at work is relevant to psychological well-being in menopause | 55 | -0.67 | 60 | 1.15 | 10 | 0.25 | 29 | -0.04 | 42 | 0.33 | 31 |
| Support from family and friends is relevant to psychological well-being in menopause | 56 | -0.29 | 46 | 1.94 | 3 | -0.15 | 42 | 0.68 | 22 | 0.67 | 23 |
| Support from healthcare professionals is relevant to psychological well-being in menopause | 57 | -0.87 | 65 | -1.58 | 75 | 0.87 | 14 | 0.51 | 25 | 1 | 11 |
| Maintaining sexual relationships is relevant to psychological well-being in menopause | 58 | -0.34 | 49 | 0.14 | 35 | -0.58 | 56 | 1.78 | 5 | -1 | 68 |
| Sexual desire and sensation are relevant to psychological well-being in menopause | 59 | -0.55 | 58 | 0.45 | 25 | -1.05 | 68 | 0.95 | 16 | -0.33 | 53 |
| Feeling able to talk about it to others is relevant to psychological well-being in menopause | 60 | 0.85 | 16 | 0 | 41 | -0.66 | 57 | 1.65 | 6 | 0.33 | 32 |
| Secrecy around the topic is relevant to psychological well-being in menopause | 61 | -0.99 | 71 | -1.04 | 68 | -1.34 | 76 | -0.53 | 56 | -0.33 | 54 |
| Responses of others is relevant to psychological well-being in menopause | 62 | -1.41 | 74 | -0.57 | 60 | -0.99 | 67 | 0.02 | 38 | 0.33 | 33 |
| Others making jokes about symptoms is relevant to psychological well-being in menopause | 63 | -1.64 | 77 | 1.1 | 12 | -0.83 | 63 | -0.59 | 58 | -0.67 | 62 |
| Empathy from others is relevant to psychological well-being in menopause | 64 | -0.23 | 44 | 1.07 | 14 | -1.5 | 79 | -0.6 | 59 | -1 | 69 |
| Validation from others is relevant to psychological well-being in menopause | 65 | -0.22 | 43 | 0.03 | 38 | -0.02 | 36 | -1.51 | 76 | -0.67 | 63 |
| Attitudes of other women are relevant to psychological well-being in menopause | 66 | -0.94 | 68 | 0.34 | 28 | -0.71 | 62 | 0.11 | 33 | 1 | 12 |
| Attitudes of men are relevant to psychological well-being in menopause | 67 | -0.93 | 67 | 1.15 | 11 | -1.22 | 74 | -1.41 | 74 | 0 | 45 |
| Social attitudes to ageing are relevant to psychological well-being in menopause | 68 | -1.02 | 72 | -2.06 | 79 | 0.82 | 16 | 0.35 | 28 | 0.33 | 34 |
| Social attitudes to women are relevant to psychological well-being in menopause | 69 | -0.22 | 42 | -1.86 | 77 | -0.01 | 35 | 0.99 | 15 | 1 | 13 |
| Social messages about HRT are relevant to psychological well-being in menopause | 70 | -1.6 | 76 | -0.06 | 42 | -0.57 | 55 | -0.97 | 69 | -1.33 | 74 |
| Confidence in physical appearance is relevant to psychological well-being in menopause | 71 | 0.54 | 25 | 0 | 40 | 0.13 | 33 | 0.66 | 23 | 1 | 14 |
| Seeing menopause as a natural process is relevant to psychological well-being in menopause | 72 | -0.3 | 47 | -0.28 | 49 | -1.06 | 71 | 0.71 | 21 | 1.67 | 6 |
| Acknowledgement of menopause as a significant milestone is relevant to psychological well-being in menopause | 73 | -0.39 | 51 | 0.13 | 36 | -1.09 | 72 | 0.34 | 29 | -1 | 70 |
| Seeing menopause as an abnormal state is relevant to psychological well-being in menopause | 74 | 0.16 | 31 | -2.22 | 80 | -0.37 | 48 | 0.12 | 32 | 0 | 46 |
| Seeing menopause as the start of a new life stage is relevant to psychological well-being in menopause | 75 | -0.89 | 66 | 0.3 | 29 | -0.92 | 65 | 1.13 | 9 | 1 | 15 |
| Feeling free from menstruation is relevant to psychological well-being in menopause | 76 | -2.17 | 80 | 2.13 | 1 | 3.01 | 1 | 0.93 | 18 | 0.67 | 24 |
| Flexibility and reasonable adjustments at work are relevant to psychological wellbeing in menopause | 77 | -0.48 | 54 | -0.26 | 47 | 0.86 | 15 | -0.68 | 62 | 1 | 16 |
| Coping with additional life stage factors is relevant to psychological wellbeing in menopause | 78 | -0.6 | 59 | -0.35 | 51 | -0.42 | 49 | -0.47 | 53 | -0.33 | 55 |
| Depression is relevant to psychological well-being in menopause | 79 | 0.81 | 18 | 0.13 | 37 | -0.55 | 54 | 0 | 40 | -0.67 | 64 |
| Being able to hide symptoms is relevant to psychological well-being in menopause | 80 | -0.16 | 41 | -1.88 | 78 | -0.89 | 64 | -0.74 | 63 | -0.33 | 56 |

Factor Score correlations

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Factor score correlations | | |  |  |  |
|  |  |  |  |  |  |
|  | factor 1 | factor 2 | factor 3 | factor 4 | factor 5 |
| factor 1 | 1 | 0.1102 | 0.0842 | 0.0881 | 0.1856 |
| factor 2 | 0.1102 | 1 | 0.1189 | 0.1331 | 0.1307 |
| factor 3 | 0.0842 | 0.1189 | 1 | -0.0268 | 0.011 |
| factor 4 | 0.0881 | 0.1331 | -0.0268 | 1 | 0.1859 |
| factor 5 | 0.1856 | 0.1307 | 0.011 | 0.1859 | 1 |

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| --- | --- | --- |
| factor 1 | Sorts Weight | |
|  |  |  |
| Q-sort | Weight |  |
| P7 | 6.96829 |  |
| P15 | 6.9081 |  |
| P11 | 3.60203 |  |
| P2 | 2.69863 |  |
| P6 | 2.03916 |  |

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| --- | --- | --- | --- | --- | --- |
| factor 1 | Sorts Correlations | |  |  |  |
|  |  |  |  |  |  |
| Q-sort | P7 | P15 | P11 | P2 | P6 |
| P7 | 100 | 52 | 42 | 20 | 20 |
| P15 | 52 | 100 | 36 | 42 | 26 |
| P11 | 42 | 36 | 100 | 19 | 22 |
| P2 | 20 | 42 | 19 | 100 | 15 |
| P6 | 20 | 26 | 22 | 15 | 100 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Factor Scores for factor 1 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| No. | Statement | Z-score | Sort Values | Raw Sort P7 | Raw Sort P15 | Raw Sort P11 | Raw Sort P2 | Raw Sort P6 |
| 7 | Being able to function day to day is relevant to psychological wellbeing in menopause | 2.253 | 7 | 4 | 6 | 4 | 6 | 4 |
| 48 | Experiencing problems with thinking clearly is relevant to psychological well-being in menopause | 2.221 | 6 | 6 | 5 | 5 | 3 | 2 |
| 49 | Knowing that cognitive changes are not due to a brain condition (e.g. dementia) is relevant to psychological well-being in menopause | 2.133 | 6 | 7 | 7 | 2 | 0 | -1 |
| 38 | Experiencing disturbed sleep is relevant to psychological well-being in menopause | 1.95 | 5 | 5 | 4 | 3 | 6 | 2 |
| 47 | Experiencing memory problems is relevant to psychological well-being in menopause | 1.679 | 5 | 6 | 3 | 5 | 0 | 0 |
| 9 | Coping with psychological symptoms is relevant to psychological wellbeing in menopause | 1.535 | 5 | 4 | 3 | 0 | 4 | 7 |
| 50 | Experiencing emotional changes is relevant to psychological well-being in menopause | 1.513 | 4 | 3 | 2 | 6 | 3 | 4 |
| 4 | Being able to manage emotions is relevant to psychological well-being in menopause | 1.473 | 4 | 4 | 3 | 2 | 4 | 2 |
| 8 | Coping with physical symptoms is relevant to psychological wellbeing in menopause | 1.47 | 4 | 4 | 2 | 5 | 1 | 4 |
| 35 | Anxiety is relevant to psychological well-being in menopause | 1.322 | 4 | 3 | 4 | 3 | 0 | 2 |
| 5 | Feeling in control is relevant to psychological well-being in menopause | 1.258 | 3 | 5 | 5 | -1 | -2 | 0 |
| 25 | Practising self-care is relevant to psychological well-being in menopause | 1.252 | 3 | 1 | 4 | 2 | 3 | 5 |
| 37 | Experiencing migraines is relevant to psychological well-being in menopause | 1.041 | 3 | 2 | 6 | -3 | 5 | -4 |
| 6 | Feeling able to perform well at work/ in role is relevant to psychological wellbeing in menopause | 0.964 | 3 | 3 | 4 | -1 | 2 | -2 |
| 54 | Support from partner is relevant to psychological well-being in menopause | 0.848 | 3 | 0 | 3 | 2 | 7 | -3 |
| 60 | Feeling able to talk about it to others is relevant to psychological well-being in menopause | 0.845 | 3 | 3 | 0 | 3 | 1 | 3 |
| 14 | Experiencing feelings of dread is relevant to psychological well-being in menopause | 0.822 | 2 | 2 | 2 | 1 | 3 | 0 |
| 79 | Depression is relevant to psychological well-being in menopause | 0.813 | 2 | 2 | 2 | 2 | 0 | 2 |
| 27 | Accepting the experience is relevant to psychological well-being in menopause | 0.714 | 2 | 1 | 3 | -1 | 0 | 5 |
| 3 | Recognising changes as menopause is relevant to psychological well-being in menopause | 0.607 | 2 | 1 | 0 | 2 | 1 | 6 |
| 16 | Experiencing feelings of hopelessness is relevant to psychological well-being in menopause | 0.599 | 2 | 1 | 1 | 0 | 4 | 2 |
| 51 | Experiencing feelings of distress or suffering is relevant to psychological well-being in menopause | 0.579 | 2 | 1 | 2 | 1 | -1 | 3 |
| 31 | Using humour to cope is relevant to psychological well-being in menopause | 0.556 | 2 | 3 | 1 | 4 | -5 | -1 |
| 11 | Being able to carry on as before is relevant to psychological well-being in menopause | 0.542 | 2 | 1 | 1 | 6 | -2 | -2 |
| 71 | Confidence in physical appearance is relevant to psychological well-being in menopause | 0.54 | 1 | -2 | 3 | 4 | 1 | 1 |
| 19 | Experiencing feelings of loss is relevant to psychological well-being in menopause | 0.533 | 1 | 2 | 1 | 3 | -3 | 1 |
| 13 | Believing that something can help is relevant to psychological well-being in menopause | 0.442 | 1 | 1 | -1 | 7 | 0 | -2 |
| 23 | Having a positive outlook is relevant to psychological well-being in menopause | 0.36 | 1 | 2 | 0 | 0 | 2 | -1 |
| 45 | Predictability of symptoms is relevant to psychological well-being in menopause | 0.246 | 1 | 2 | 1 | -1 | 1 | -4 |
| 24 | Physical exercise is relevant to psychological well-being in menopause | 0.192 | 1 | 2 | 0 | 0 | -1 | -1 |
| 74 | Seeing menopause as an abnormal state is relevant to psychological well-being in menopause | 0.16 | 1 | 0 | 2 | 0 | 0 | -3 |
| 12 | Hearing about the experiences of others is relevant to psychological well-being in menopause | 0.153 | 1 | 1 | 1 | 1 | -3 | -1 |
| 10 | Being taken seriously is relevant to psychological well-being in menopause | 0.144 | 1 | -2 | 2 | 1 | -1 | 3 |
| 42 | Feeling unwell is relevant to psychological well-being in menopause | 0.125 | 1 | -3 | 2 | 4 | -2 | 2 |
| 29 | Taking part in enjoyable activities is relevant to psychological well-being in menopause | 0.111 | 0 | -2 | 5 | -2 | -3 | 0 |
| 15 | Experiencing feelings of fear is relevant to psychological well-being in menopause | 0.056 | 0 | 0 | 0 | 0 | 1 | 0 |
| 20 | Feeling different from before is relevant to psychological well-being in menopause | -0.01 | 0 | -3 | 1 | 3 | 1 | 0 |
| 1 | Prior knowledge about menopause is relevant to psychological well-being in menopause. | -0.06 | 0 | -1 | 0 | 0 | 0 | 2 |
| 43 | Experiencing bladder/bowel changes is relevant to psychological well-being in menopause | -0.096 | 0 | 5 | -3 | 1 | -6 | -3 |
| 40 | Managing weight is relevant to psychological well-being in menopause | -0.105 | 0 | -1 | 1 | -1 | 1 | -2 |
| 80 | Being able to hide symptoms is relevant to psychological well-being in menopause | -0.155 | 0 | 0 | 0 | 0 | -2 | -1 |
| 69 | Social attitudes to women are relevant to psychological well-being in menopause | -0.217 | 0 | 1 | 0 | -2 | 0 | -5 |
| 65 | Validation from others is relevant to psychological well-being in menopause | -0.222 | 0 | -1 | -1 | -4 | 2 | 6 |
| 64 | Empathy from others is relevant to psychological well-being in menopause | -0.225 | 0 | -2 | 1 | -2 | -1 | 3 |
| 41 | Experiencing pain is relevant to psychological well-being in menopause | -0.279 | 0 | 3 | -5 | 1 | -2 | 1 |
| 56 | Support from family and friends is relevant to psychological well-being in menopause | -0.286 | 0 | -3 | -2 | 0 | 4 | 5 |
| 72 | Seeing menopause as a natural process is relevant to psychological well-being in menopause | -0.302 | -1 | -3 | 0 | 2 | 5 | -7 |
| 44 | Duration of menopause stages is relevant to psychological well-being in menopause | -0.334 | -1 | 2 | 0 | -7 | -1 | -1 |
| 58 | Maintaining sexual relationships is relevant to psychological well-being in menopause | -0.338 | -1 | 0 | -3 | -1 | 3 | 0 |
| 2 | Feeling prepared for the onset of symptoms is relevant to psychological well-being in menopause | -0.374 | -1 | 0 | -2 | 0 | 3 | -6 |
| 73 | Acknowledgement of menopause as a significant milestone is relevant to psychological well-being in menopause | -0.387 | -1 | -1 | -2 | -2 | 5 | -2 |
| 17 | Experiencing feelings of embarrassment is relevant to psychological well-being in menopause | -0.438 | -1 | 1 | -5 | 2 | -1 | 1 |
| 39 | Experiencing hot flushes is relevant to psychological well-being in menopause | -0.452 | -1 | 0 | -2 | 1 | -5 | 1 |
| 77 | Flexibility and reasonable adjustments at work are relevant to psychological wellbeing in menopause | -0.482 | -1 | 0 | -1 | -6 | 2 | 0 |
| 53 | Perceived loss of youth is relevant to psychological well-being in menopause | -0.5 | -1 | -4 | -1 | 3 | 0 | 0 |
| 46 | Visibility of symptoms to others is relevant to psychological well-being in menopause | -0.501 | -1 | -2 | -1 | 1 | -1 | -2 |
| 28 | Talking to other menopausal women is relevant to psychological well-being in menopause | -0.541 | -2 | -1 | -2 | 1 | -4 | 1 |
| 59 | Sexual desire and sensation are relevant to psychological well-being in menopause | -0.546 | -2 | 0 | -2 | -4 | 0 | 1 |
| 78 | Coping with additional life stage factors is relevant to psychological wellbeing in menopause | -0.596 | -2 | -2 | -2 | -1 | -2 | 4 |
| 55 | Support at work is relevant to psychological well-being in menopause | -0.672 | -2 | -3 | 1 | -6 | 2 | -1 |
| 30 | Not giving in to symptoms is relevant to psychological well-being in menopause | -0.675 | -2 | -1 | -1 | -1 | -1 | -6 |
| 26 | Making lifestyle adjustments is relevant to psychological well-being in menopause | -0.683 | -2 | -1 | -1 | -3 | -3 | 0 |
| 21 | Knowing what help is available is relevant to psychological well-being in menopause | -0.773 | -2 | -4 | 0 | -2 | 0 | -1 |
| 32 | Feeling concerned about risks of HRT is relevant to psychological well-being in menopause | -0.848 | -2 | -2 | -1 | -4 | 1 | -4 |
| 57 | Support from healthcare professionals is relevant to psychological well-being in menopause | -0.872 | -3 | -1 | -3 | -3 | -2 | 1 |
| 75 | Seeing menopause as the start of a new life stage is relevant to psychological well-being in menopause | -0.891 | -3 | -5 | 0 | -2 | 2 | -3 |
| 67 | Attitudes of men are relevant to psychological well-being in menopause | -0.932 | -3 | -1 | -4 | -3 | 1 | -1 |
| 66 | Attitudes of other women are relevant to psychological well-being in menopause | -0.941 | -3 | -1 | -1 | -4 | -7 | 1 |
| 34 | Having alternative treatments to HRT is relevant to psychological well-being in menopause | -0.946 | -3 | 0 | -5 | 0 | -1 | -4 |
| 22 | Seeking help is relevant to psychological well-being in menopause | -0.979 | -3 | -2 | -4 | 0 | -2 | 0 |
| 61 | Secrecy around the topic is relevant to psychological well-being in menopause | -0.992 | -4 | 0 | -4 | -5 | -3 | 3 |
| 68 | Social attitudes to ageing are relevant to psychological well-being in menopause | -1.019 | -4 | -6 | -1 | -1 | -1 | 3 |
| 18 | Experiencing feelings of failure is relevant to psychological well-being in menopause | -1.299 | -4 | -6 | -3 | -2 | 2 | 1 |
| 62 | Responses of others is relevant to psychological well-being in menopause | -1.408 | -4 | -5 | -2 | -3 | -3 | 0 |
| 36 | Coping with side effects of medication is relevant to psychological well-being in menopause | -1.493 | -5 | -4 | -6 | -1 | 2 | -2 |
| 70 | Social messages about HRT are relevant to psychological well-being in menopause | -1.595 | -5 | -3 | -3 | -5 | -4 | -3 |
| 63 | Others making jokes about symptoms is relevant to psychological well-being in menopause | -1.639 | -5 | 0 | -6 | -3 | -6 | -5 |
| 33 | Taking HRT is relevant to psychological well-being in menopause | -1.824 | -6 | -4 | -7 | 1 | -4 | -2 |
| 52 | Loss of fertility is relevant to psychological well-being in menopause | -1.951 | -6 | -7 | -3 | -2 | -4 | -3 |
| 76 | Feeling free from menstruation is relevant to psychological well-being in menopause | -2.171 | -7 | -5 | -4 | -5 | -5 | -5 |

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| --- | --- | --- |
| factor 2 | Sorts Weight | |
|  |  |  |
| Q-sort | Weight |  |
| P14 | 10 |  |
| P13 | 6.66998 |  |
| P12 | 0.93712 |  |

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| --- | --- | --- | --- |
| factor 2 | Sorts Correlations | |  |
|  |  |  |  |
| Q-sort | P14 | P13 | P12 |
| P14 | 100 | 92 | 26 |
| P13 | 92 | 100 | 21 |
| P12 | 26 | 21 | 100 |

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| --- | --- | --- | --- | --- | --- | --- |
|  | Factor Scores for factor 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Statement Number | Statement | Z-score | Sort Values | Raw Sort P14 | Raw Sort P13 | Raw Sort P12 |
| 76 | Feeling free from menstruation is relevant to psychological well-being in menopause | 2.133 | 7 | 7 | 5 | 3 |
| 6 | Feeling able to perform well at work/ in role is relevant to psychological wellbeing in menopause | 2.01 | 6 | 6 | 6 | 0 |
| 56 | Support from family and friends is relevant to psychological well-being in menopause | 1.942 | 6 | 5 | 7 | 0 |
| 23 | Having a positive outlook is relevant to psychological well-being in menopause | 1.779 | 5 | 6 | 4 | 2 |
| 28 | Talking to other menopausal women is relevant to psychological well-being in menopause | 1.664 | 5 | 4 | 6 | 3 |
| 31 | Using humour to cope is relevant to psychological well-being in menopause | 1.559 | 5 | 5 | 4 | 1 |
| 30 | Not giving in to symptoms is relevant to psychological well-being in menopause | 1.31 | 4 | 5 | 2 | 2 |
| 33 | Taking HRT is relevant to psychological well-being in menopause | 1.245 | 4 | 4 | 4 | -5 |
| 29 | Taking part in enjoyable activities is relevant to psychological well-being in menopause | 1.235 | 4 | 3 | 5 | -2 |
| 55 | Support at work is relevant to psychological well-being in menopause | 1.149 | 4 | 4 | 3 | -3 |
| 67 | Attitudes of men are relevant to psychological well-being in menopause | 1.149 | 3 | 4 | 3 | -3 |
| 63 | Others making jokes about symptoms is relevant to psychological well-being in menopause | 1.101 | 3 | 3 | 4 | -2 |
| 7 | Being able to function day to day is relevant to psychological wellbeing in menopause | 1.098 | 3 | 3 | 3 | 5 |
| 64 | Empathy from others is relevant to psychological well-being in menopause | 1.071 | 3 | 2 | 5 | 0 |
| 11 | Being able to carry on as before is relevant to psychological well-being in menopause | 1.061 | 3 | 3 | 3 | 3 |
| 8 | Coping with physical symptoms is relevant to psychological wellbeing in menopause | 0.927 | 3 | 3 | 2 | 3 |
| 3 | Recognising changes as menopause is relevant to psychological well-being in menopause | 0.898 | 2 | 2 | 3 | 5 |
| 4 | Being able to manage emotions is relevant to psychological well-being in menopause | 0.87 | 2 | 3 | 2 | 0 |
| 9 | Coping with psychological symptoms is relevant to psychological wellbeing in menopause | 0.803 | 2 | 2 | 3 | 0 |
| 13 | Believing that something can help is relevant to psychological well-being in menopause | 0.782 | 2 | 2 | 2 | 6 |
| 54 | Support from partner is relevant to psychological well-being in menopause | 0.764 | 2 | 2 | 2 | 5 |
| 50 | Experiencing emotional changes is relevant to psychological well-being in menopause | 0.707 | 2 | 2 | 2 | 2 |
| 48 | Experiencing problems with thinking clearly is relevant to psychological well-being in menopause | 0.632 | 2 | 2 | 2 | -2 |
| 40 | Managing weight is relevant to psychological well-being in menopause | 0.611 | 2 | 2 | 1 | 4 |
| 59 | Sexual desire and sensation are relevant to psychological well-being in menopause | 0.45 | 1 | 1 | 2 | -1 |
| 39 | Experiencing hot flushes is relevant to psychological well-being in menopause | 0.41 | 1 | 1 | 1 | 4 |
| 25 | Practising self-care is relevant to psychological well-being in menopause | 0.354 | 1 | 1 | 1 | 1 |
| 66 | Attitudes of other women are relevant to psychological well-being in menopause | 0.335 | 1 | 1 | 1 | 0 |
| 75 | Seeing menopause as the start of a new life stage is relevant to psychological well-being in menopause | 0.297 | 1 | 1 | 1 | -2 |
| 12 | Hearing about the experiences of others is relevant to psychological well-being in menopause | 0.276 | 1 | 1 | 0 | 4 |
| 38 | Experiencing disturbed sleep is relevant to psychological well-being in menopause | 0.247 | 1 | 0 | 1 | 6 |
| 21 | Knowing what help is available is relevant to psychological well-being in menopause | 0.22 | 1 | 1 | 0 | 1 |
| 20 | Feeling different from before is relevant to psychological well-being in menopause | 0.201 | 1 | 1 | 0 | 0 |
| 10 | Being taken seriously is relevant to psychological well-being in menopause | 0.153 | 1 | 0 | 1 | 1 |
| 58 | Maintaining sexual relationships is relevant to psychological well-being in menopause | 0.144 | 0 | 1 | 0 | -3 |
| 73 | Acknowledgement of menopause as a significant milestone is relevant to psychological well-being in menopause | 0.134 | 0 | 0 | 1 | 0 |
| 79 | Depression is relevant to psychological well-being in menopause | 0.134 | 0 | 0 | 1 | 0 |
| 65 | Validation from others is relevant to psychological well-being in menopause | 0.029 | 0 | 1 | -1 | -2 |
| 22 | Seeking help is relevant to psychological well-being in menopause | 0.019 | 0 | 0 | 0 | 1 |
| 71 | Confidence in physical appearance is relevant to psychological well-being in menopause | 0.002 | 0 | 0 | 1 | -7 |
| 60 | Feeling able to talk about it to others is relevant to psychological well-being in menopause | 0 | 0 | 0 | 0 | 0 |
| 70 | Social messages about HRT are relevant to psychological well-being in menopause | -0.056 | 0 | 0 | 0 | -3 |
| 35 | Anxiety is relevant to psychological well-being in menopause | -0.075 | 0 | 0 | 0 | -4 |
| 47 | Experiencing memory problems is relevant to psychological well-being in menopause | -0.094 | 0 | 0 | 0 | -5 |
| 32 | Feeling concerned about risks of HRT is relevant to psychological well-being in menopause | -0.153 | 0 | 0 | -1 | -1 |
| 5 | Feeling in control is relevant to psychological well-being in menopause | -0.22 | 0 | -1 | 0 | -1 |
| 77 | Flexibility and reasonable adjustments at work are relevant to psychological wellbeing in menopause | -0.257 | -1 | -1 | 0 | -3 |
| 27 | Accepting the experience is relevant to psychological well-being in menopause | -0.27 | -1 | 0 | -3 | 7 |
| 72 | Seeing menopause as a natural process is relevant to psychological well-being in menopause | -0.278 | -1 | -1 | -1 | 3 |
| 45 | Predictability of symptoms is relevant to psychological well-being in menopause | -0.297 | -1 | -1 | -1 | 2 |
| 78 | Coping with additional life stage factors is relevant to psychological wellbeing in menopause | -0.354 | -1 | -1 | -1 | -1 |
| 24 | Physical exercise is relevant to psychological well-being in menopause | -0.431 | -1 | -1 | -2 | 2 |
| 34 | Having alternative treatments to HRT is relevant to psychological well-being in menopause | -0.431 | -1 | -1 | -2 | 2 |
| 44 | Duration of menopause stages is relevant to psychological well-being in menopause | -0.45 | -1 | -1 | -2 | 1 |
| 18 | Experiencing feelings of failure is relevant to psychological well-being in menopause | -0.488 | -1 | -1 | -2 | -1 |
| 42 | Feeling unwell is relevant to psychological well-being in menopause | -0.488 | -1 | -1 | -2 | -1 |
| 15 | Experiencing feelings of fear is relevant to psychological well-being in menopause | -0.498 | -2 | -2 | -1 | 2 |
| 51 | Experiencing feelings of distress or suffering is relevant to psychological well-being in menopause | -0.554 | -2 | -2 | -1 | -1 |
| 53 | Perceived loss of youth is relevant to psychological well-being in menopause | -0.554 | -2 | -2 | -1 | -1 |
| 62 | Responses of others is relevant to psychological well-being in menopause | -0.573 | -2 | -2 | -1 | -2 |
| 26 | Making lifestyle adjustments is relevant to psychological well-being in menopause | -0.584 | -2 | -3 | 0 | 1 |
| 2 | Feeling prepared for the onset of symptoms is relevant to psychological well-being in menopause | -0.651 | -2 | -2 | -2 | 1 |
| 46 | Visibility of symptoms to others is relevant to psychological well-being in menopause | -0.755 | -2 | -3 | -1 | -1 |
| 1 | Prior knowledge about menopause is relevant to psychological well-being in menopause. | -0.803 | -2 | -2 | -3 | 0 |
| 49 | Knowing that cognitive changes are not due to a brain condition (e.g. dementia) is relevant to psychological well-being in menopause | -0.803 | -3 | -2 | -3 | 0 |
| 16 | Experiencing feelings of hopelessness is relevant to psychological well-being in menopause | -0.833 | -3 | -3 | -2 | 2 |
| 36 | Coping with side effects of medication is relevant to psychological well-being in menopause | -0.929 | -3 | -3 | -3 | 4 |
| 61 | Secrecy around the topic is relevant to psychological well-being in menopause | -1.042 | -3 | -3 | -3 | -2 |
| 17 | Experiencing feelings of embarrassment is relevant to psychological well-being in menopause | -1.05 | -3 | -2 | -4 | -6 |
| 41 | Experiencing pain is relevant to psychological well-being in menopause | -1.08 | -3 | -3 | -3 | -4 |
| 37 | Experiencing migraines is relevant to psychological well-being in menopause | -1.128 | -4 | -4 | -2 | -3 |
| 43 | Experiencing bladder/bowel changes is relevant to psychological well-being in menopause | -1.433 | -4 | -4 | -4 | -5 |
| 19 | Experiencing feelings of loss is relevant to psychological well-being in menopause | -1.492 | -4 | -4 | -5 | -1 |
| 14 | Experiencing feelings of dread is relevant to psychological well-being in menopause | -1.551 | -4 | -4 | -6 | 3 |
| 57 | Support from healthcare professionals is relevant to psychological well-being in menopause | -1.578 | -5 | -5 | -4 | -2 |
| 52 | Loss of fertility is relevant to psychological well-being in menopause | -1.653 | -5 | -5 | -4 | -6 |
| 69 | Social attitudes to women are relevant to psychological well-being in menopause | -1.856 | -5 | -6 | -5 | 1 |
| 80 | Being able to hide symptoms is relevant to psychological well-being in menopause | -1.883 | -6 | -5 | -6 | -4 |
| 68 | Social attitudes to ageing are relevant to psychological well-being in menopause | -2.057 | -6 | -7 | -5 | 1 |
| 74 | Seeing menopause as an abnormal state is relevant to psychological well-being in menopause | -2.219 | -7 | -6 | -7 | -4 |

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| --- | --- | --- |
| factor 3 | Sorts Weight | |
|  |  |  |
| Q-sort | Weight |  |
| P1 | 7.19975 |  |
| P4 | 5.12845 |  |
| P9 | 3.77768 |  |
| P10 | -6.80483 |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| factor 3 | Sorts Correlations | |  |  |
|  |  |  |  |  |
| Q-sort | P1 | P4 | P9 | P10 |
| P1 | 100 | 30 | 23 | -19 |
| P4 | 30 | 100 | 7 | -30 |
| P9 | 23 | 7 | 100 | -32 |
| P10 | -19 | -30 | -32 | 100 |

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|  | Factor Scores for factor 3 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Statement Number | Statement | Z-score | Sort Values | Raw Sort P1 | Raw Sort P4 | Raw Sort P9 | Raw Sort P10 |
| 76 | Feeling free from menstruation is relevant to psychological well-being in menopause | 3.013 | 7 | 7 | 7 | 1 | -7 |
| 39 | Experiencing hot flushes is relevant to psychological well-being in menopause | 2.445 | 6 | 6 | 6 | 1 | -5 |
| 48 | Experiencing problems with thinking clearly is relevant to psychological well-being in menopause | 2.265 | 6 | 2 | 5 | 6 | -6 |
| 38 | Experiencing disturbed sleep is relevant to psychological well-being in menopause | 2.014 | 5 | 4 | 6 | 5 | -2 |
| 40 | Managing weight is relevant to psychological well-being in menopause | 2.01 | 5 | 5 | 5 | -1 | -5 |
| 33 | Taking HRT is relevant to psychological well-being in menopause | 1.639 | 5 | 6 | 0 | 3 | -3 |
| 8 | Coping with physical symptoms is relevant to psychological wellbeing in menopause | 1.624 | 4 | 4 | 4 | 3 | -2 |
| 43 | Experiencing bladder/bowel changes is relevant to psychological well-being in menopause | 1.445 | 4 | 5 | 1 | 3 | -2 |
| 44 | Duration of menopause stages is relevant to psychological well-being in menopause | 1.444 | 4 | 3 | 1 | 5 | -3 |
| 41 | Experiencing pain is relevant to psychological well-being in menopause | 1.264 | 4 | 4 | 3 | 0 | -2 |
| 36 | Coping with side effects of medication is relevant to psychological well-being in menopause | 1.093 | 3 | 4 | 0 | 2 | -2 |
| 6 | Feeling able to perform well at work/ in role is relevant to psychological wellbeing in menopause | 0.949 | 3 | 1 | -4 | 6 | -5 |
| 22 | Seeking help is relevant to psychological well-being in menopause | 0.919 | 3 | 2 | 2 | 1 | -2 |
| 57 | Support from healthcare professionals is relevant to psychological well-being in menopause | 0.868 | 3 | 3 | 5 | -2 | 0 |
| 77 | Flexibility and reasonable adjustments at work are relevant to psychological wellbeing in menopause | 0.861 | 3 | 1 | 2 | 4 | -1 |
| 68 | Social attitudes to ageing are relevant to psychological well-being in menopause | 0.817 | 3 | 2 | 3 | 2 | 0 |
| 7 | Being able to function day to day is relevant to psychological wellbeing in menopause | 0.794 | 2 | -1 | 2 | 7 | -1 |
| 13 | Believing that something can help is relevant to psychological well-being in menopause | 0.687 | 2 | 1 | 0 | 1 | -3 |
| 49 | Knowing that cognitive changes are not due to a brain condition (e.g. dementia) is relevant to psychological well-being in menopause | 0.672 | 2 | 0 | -3 | 5 | -4 |
| 17 | Experiencing feelings of embarrassment is relevant to psychological well-being in menopause | 0.638 | 2 | 3 | 0 | 2 | 0 |
| 37 | Experiencing migraines is relevant to psychological well-being in menopause | 0.533 | 2 | -3 | 1 | 0 | -6 |
| 10 | Being taken seriously is relevant to psychological well-being in menopause | 0.473 | 2 | -1 | 4 | 4 | 1 |
| 29 | Taking part in enjoyable activities is relevant to psychological well-being in menopause | 0.434 | 2 | -1 | 1 | 4 | -1 |
| 46 | Visibility of symptoms to others is relevant to psychological well-being in menopause | 0.391 | 2 | 3 | -5 | 4 | -1 |
| 21 | Knowing what help is available is relevant to psychological well-being in menopause | 0.369 | 1 | 1 | 1 | 3 | 1 |
| 31 | Using humour to cope is relevant to psychological well-being in menopause | 0.332 | 1 | 1 | 2 | -6 | -3 |
| 50 | Experiencing emotional changes is relevant to psychological well-being in menopause | 0.332 | 1 | 5 | -2 | -1 | 1 |
| 14 | Experiencing feelings of dread is relevant to psychological well-being in menopause | 0.262 | 1 | 2 | 1 | -2 | 0 |
| 55 | Support at work is relevant to psychological well-being in menopause | 0.251 | 1 | -3 | 1 | 2 | -3 |
| 34 | Having alternative treatments to HRT is relevant to psychological well-being in menopause | 0.214 | 1 | -2 | 0 | 1 | -3 |
| 11 | Being able to carry on as before is relevant to psychological well-being in menopause | 0.202 | 1 | 0 | -1 | 2 | -1 |
| 47 | Experiencing memory problems is relevant to psychological well-being in menopause | 0.201 | 1 | 1 | -3 | 1 | -2 |
| 71 | Confidence in physical appearance is relevant to psychological well-being in menopause | 0.134 | 1 | -2 | 4 | 0 | 0 |
| 18 | Experiencing feelings of failure is relevant to psychological well-being in menopause | 0 | 1 | 0 | 0 | 0 | 0 |
| 69 | Social attitudes to women are relevant to psychological well-being in menopause | -0.007 | 0 | -3 | 4 | 2 | 1 |
| 65 | Validation from others is relevant to psychological well-being in menopause | -0.016 | 0 | 0 | 0 | -2 | -1 |
| 32 | Feeling concerned about risks of HRT is relevant to psychological well-being in menopause | -0.064 | 0 | -1 | -3 | -2 | -4 |
| 42 | Feeling unwell is relevant to psychological well-being in menopause | -0.093 | 0 | -1 | -4 | -1 | -4 |
| 51 | Experiencing feelings of distress or suffering is relevant to psychological well-being in menopause | -0.111 | 0 | -2 | 3 | 2 | 2 |
| 2 | Feeling prepared for the onset of symptoms is relevant to psychological well-being in menopause | -0.135 | 0 | 2 | 1 | -5 | 1 |
| 45 | Predictability of symptoms is relevant to psychological well-being in menopause | -0.136 | 0 | 1 | -1 | -4 | -1 |
| 56 | Support from family and friends is relevant to psychological well-being in menopause | -0.147 | 0 | 1 | 2 | -1 | 3 |
| 5 | Feeling in control is relevant to psychological well-being in menopause | -0.173 | 0 | -2 | 2 | -1 | 0 |
| 23 | Having a positive outlook is relevant to psychological well-being in menopause | -0.242 | 0 | 3 | 1 | -1 | 5 |
| 16 | Experiencing feelings of hopelessness is relevant to psychological well-being in menopause | -0.277 | 0 | 0 | -1 | -2 | 0 |
| 26 | Making lifestyle adjustments is relevant to psychological well-being in menopause | -0.336 | 0 | 0 | -3 | 0 | 0 |
| 35 | Anxiety is relevant to psychological well-being in menopause | -0.372 | -1 | -1 | 0 | 1 | 2 |
| 74 | Seeing menopause as an abnormal state is relevant to psychological well-being in menopause | -0.374 | -1 | 0 | 3 | -5 | 2 |
| 78 | Coping with additional life stage factors is relevant to psychological wellbeing in menopause | -0.424 | -1 | 0 | 3 | -2 | 4 |
| 15 | Experiencing feelings of fear is relevant to psychological well-being in menopause | -0.427 | -1 | -2 | -1 | 0 | 0 |
| 53 | Perceived loss of youth is relevant to psychological well-being in menopause | -0.432 | -1 | -1 | -2 | 3 | 2 |
| 4 | Being able to manage emotions is relevant to psychological well-being in menopause | -0.46 | -1 | 0 | -1 | 3 | 4 |
| 30 | Not giving in to symptoms is relevant to psychological well-being in menopause | -0.528 | -1 | 2 | 0 | -3 | 4 |
| 79 | Depression is relevant to psychological well-being in menopause | -0.546 | -1 | -3 | 2 | 0 | 2 |
| 70 | Social messages about HRT are relevant to psychological well-being in menopause | -0.574 | -1 | -6 | -2 | 0 | -4 |
| 58 | Maintaining sexual relationships is relevant to psychological well-being in menopause | -0.58 | -1 | 2 | -4 | 0 | 3 |
| 60 | Feeling able to talk about it to others is relevant to psychological well-being in menopause | -0.655 | -2 | 1 | -4 | 1 | 3 |
| 3 | Recognising changes as menopause is relevant to psychological well-being in menopause | -0.659 | -2 | -2 | -1 | -1 | 1 |
| 20 | Feeling different from before is relevant to psychological well-being in menopause | -0.695 | -2 | 1 | -2 | -4 | 2 |
| 24 | Physical exercise is relevant to psychological well-being in menopause | -0.7 | -2 | -3 | -1 | -5 | -2 |
| 54 | Support from partner is relevant to psychological well-being in menopause | -0.709 | -2 | 2 | -5 | -2 | 2 |
| 66 | Attitudes of other women are relevant to psychological well-being in menopause | -0.712 | -2 | -2 | 0 | -3 | 1 |
| 63 | Others making jokes about symptoms is relevant to psychological well-being in menopause | -0.827 | -2 | -3 | 2 | -7 | 0 |
| 80 | Being able to hide symptoms is relevant to psychological well-being in menopause | -0.892 | -2 | -5 | -3 | 1 | -1 |
| 75 | Seeing menopause as the start of a new life stage is relevant to psychological well-being in menopause | -0.917 | -3 | 3 | 0 | -6 | 6 |
| 1 | Prior knowledge about menopause is relevant to psychological well-being in menopause. | -0.982 | -3 | -6 | 1 | 0 | 1 |
| 62 | Responses of others is relevant to psychological well-being in menopause | -0.99 | -3 | -4 | -1 | -3 | 0 |
| 59 | Sexual desire and sensation are relevant to psychological well-being in menopause | -1.046 | -3 | -1 | -6 | 1 | 2 |
| 9 | Coping with psychological symptoms is relevant to psychological wellbeing in menopause | -1.051 | -3 | 0 | -2 | -1 | 5 |
| 25 | Practising self-care is relevant to psychological well-being in menopause | -1.051 | -3 | 0 | -2 | -1 | 5 |
| 72 | Seeing menopause as a natural process is relevant to psychological well-being in menopause | -1.063 | -4 | -5 | 3 | -2 | 3 |
| 73 | Acknowledgement of menopause as a significant milestone is relevant to psychological well-being in menopause | -1.092 | -4 | -2 | 0 | -4 | 3 |
| 28 | Talking to other menopausal women is relevant to psychological well-being in menopause | -1.111 | -4 | -5 | -2 | -3 | -1 |
| 67 | Attitudes of men are relevant to psychological well-being in menopause | -1.221 | -4 | -4 | -1 | -4 | 1 |
| 27 | Accepting the experience is relevant to psychological well-being in menopause | -1.253 | -5 | 0 | -1 | -3 | 6 |
| 61 | Secrecy around the topic is relevant to psychological well-being in menopause | -1.339 | -5 | -4 | -5 | 0 | 1 |
| 12 | Hearing about the experiences of others is relevant to psychological well-being in menopause | -1.426 | -5 | -7 | -2 | -3 | -1 |
| 19 | Experiencing feelings of loss is relevant to psychological well-being in menopause | -1.426 | -6 | -1 | -6 | 0 | 4 |
| 64 | Empathy from others is relevant to psychological well-being in menopause | -1.495 | -6 | -4 | -3 | -1 | 3 |
| 52 | Loss of fertility is relevant to psychological well-being in menopause | -1.82 | -7 | -1 | -7 | 2 | 7 |

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| factor 4 | Sorts Weight | |
|  |  |  |
| Q-sort | Weight |  |
| P16 | 4.95551 |  |
| P3 | 4.49251 |  |
| P8 | 3.83645 |  |

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| --- | --- | --- | --- |
| factor 4 | Sorts Correlations | |  |
|  |  |  |  |
| Q-sort | P16 | P3 | P8 |
| P16 | 100 | 19 | 7 |
| P3 | 19 | 100 | 26 |
| P8 | 7 | 26 | 100 |

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| --- | --- | --- | --- | --- | --- | --- |
|  | Factor Scores for factor 4 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Statement Number | Statement | Z-score | Sort Values | Raw Sort P16 | Raw Sort P3 | Raw Sort P8 |
| 8 | Coping with physical symptoms is relevant to psychological wellbeing in menopause | 2.125 | 7 | 4 | 4 | 5 |
| 4 | Being able to manage emotions is relevant to psychological well-being in menopause | 2.066 | 6 | 6 | 4 | 2 |
| 32 | Feeling concerned about risks of HRT is relevant to psychological well-being in menopause | 1.916 | 6 | 3 | 3 | 6 |
| 54 | Support from partner is relevant to psychological well-being in menopause | 1.787 | 5 | 5 | 6 | -1 |
| 58 | Maintaining sexual relationships is relevant to psychological well-being in menopause | 1.78 | 5 | 6 | 4 | 0 |
| 60 | Feeling able to talk about it to others is relevant to psychological well-being in menopause | 1.647 | 5 | 4 | 2 | 4 |
| 7 | Being able to function day to day is relevant to psychological wellbeing in menopause | 1.58 | 4 | 7 | 0 | 2 |
| 21 | Knowing what help is available is relevant to psychological well-being in menopause | 1.207 | 4 | 2 | 5 | 0 |
| 75 | Seeing menopause as the start of a new life stage is relevant to psychological well-being in menopause | 1.132 | 4 | -1 | 7 | 1 |
| 25 | Practising self-care is relevant to psychological well-being in menopause | 1.092 | 4 | 1 | 2 | 4 |
| 24 | Physical exercise is relevant to psychological well-being in menopause | 1.065 | 3 | -2 | 6 | 3 |
| 9 | Coping with psychological symptoms is relevant to psychological wellbeing in menopause | 1.033 | 3 | 3 | 2 | 1 |
| 50 | Experiencing emotional changes is relevant to psychological well-being in menopause | 1.033 | 3 | -1 | 3 | 5 |
| 52 | Loss of fertility is relevant to psychological well-being in menopause | 1.019 | 3 | 1 | -1 | 7 |
| 69 | Social attitudes to women are relevant to psychological well-being in menopause | 0.991 | 3 | 2 | 2 | 2 |
| 59 | Sexual desire and sensation are relevant to psychological well-being in menopause | 0.948 | 3 | 5 | 1 | -1 |
| 29 | Taking part in enjoyable activities is relevant to psychological well-being in menopause | 0.932 | 2 | 0 | 3 | 3 |
| 76 | Feeling free from menstruation is relevant to psychological well-being in menopause | 0.932 | 2 | 0 | 3 | 3 |
| 3 | Recognising changes as menopause is relevant to psychological well-being in menopause | 0.859 | 2 | 0 | 0 | 6 |
| 38 | Experiencing disturbed sleep is relevant to psychological well-being in menopause | 0.831 | 2 | 1 | 3 | 1 |
| 72 | Seeing menopause as a natural process is relevant to psychological well-being in menopause | 0.712 | 2 | -3 | 5 | 3 |
| 56 | Support from family and friends is relevant to psychological well-being in menopause | 0.68 | 2 | 2 | 1 | 1 |
| 71 | Confidence in physical appearance is relevant to psychological well-being in menopause | 0.663 | 2 | 1 | 2 | 1 |
| 41 | Experiencing pain is relevant to psychological well-being in menopause | 0.613 | 2 | 5 | -1 | -1 |
| 57 | Support from healthcare professionals is relevant to psychological well-being in menopause | 0.513 | 1 | 2 | 0 | 1 |
| 43 | Experiencing bladder/bowel changes is relevant to psychological well-being in menopause | 0.506 | 1 | 3 | -2 | 2 |
| 22 | Seeking help is relevant to psychological well-being in menopause | 0.426 | 1 | 1 | 4 | -3 |
| 68 | Social attitudes to ageing are relevant to psychological well-being in menopause | 0.352 | 1 | 1 | 1 | 0 |
| 73 | Acknowledgement of menopause as a significant milestone is relevant to psychological well-being in menopause | 0.335 | 1 | 0 | 2 | 0 |
| 28 | Talking to other menopausal women is relevant to psychological well-being in menopause | 0.311 | 1 | 0 | 1 | 1 |
| 53 | Perceived loss of youth is relevant to psychological well-being in menopause | 0.293 | 1 | 3 | 1 | -3 |
| 74 | Seeing menopause as an abnormal state is relevant to psychological well-being in menopause | 0.118 | 1 | 4 | -2 | -2 |
| 66 | Attitudes of other women are relevant to psychological well-being in menopause | 0.108 | 1 | 2 | 1 | -3 |
| 27 | Accepting the experience is relevant to psychological well-being in menopause | 0.101 | 1 | -1 | 0 | 2 |
| 33 | Taking HRT is relevant to psychological well-being in menopause | 0.077 | 0 | -1 | -1 | 3 |
| 5 | Feeling in control is relevant to psychological well-being in menopause | 0.067 | 0 | -3 | 2 | 2 |
| 36 | Coping with side effects of medication is relevant to psychological well-being in menopause | 0.042 | 0 | 1 | 0 | -1 |
| 62 | Responses of others is relevant to psychological well-being in menopause | 0.024 | 0 | 0 | 1 | -1 |
| 13 | Believing that something can help is relevant to psychological well-being in menopause | 0 | 0 | 0 | 0 | 0 |
| 79 | Depression is relevant to psychological well-being in menopause | -0.001 | 0 | 4 | -1 | -4 |
| 26 | Making lifestyle adjustments is relevant to psychological well-being in menopause | -0.032 | 0 | 1 | -3 | 2 |
| 55 | Support at work is relevant to psychological well-being in menopause | -0.042 | 0 | -1 | 0 | 1 |
| 20 | Feeling different from before is relevant to psychological well-being in menopause | -0.066 | 0 | -1 | -1 | 2 |
| 16 | Experiencing feelings of hopelessness is relevant to psychological well-being in menopause | -0.116 | 0 | 3 | -4 | 0 |
| 23 | Having a positive outlook is relevant to psychological well-being in menopause | -0.229 | 0 | -5 | 5 | -1 |
| 48 | Experiencing problems with thinking clearly is relevant to psychological well-being in menopause | -0.252 | 0 | 2 | -2 | -2 |
| 19 | Experiencing feelings of loss is relevant to psychological well-being in menopause | -0.273 | -1 | 1 | -7 | 5 |
| 39 | Experiencing hot flushes is relevant to psychological well-being in menopause | -0.3 | -1 | -2 | -3 | 4 |
| 51 | Experiencing feelings of distress or suffering is relevant to psychological well-being in menopause | -0.335 | -1 | 0 | -2 | 0 |
| 10 | Being taken seriously is relevant to psychological well-being in menopause | -0.363 | -1 | -3 | 2 | -1 |
| 2 | Feeling prepared for the onset of symptoms is relevant to psychological well-being in menopause | -0.37 | -1 | -2 | 0 | 0 |
| 12 | Hearing about the experiences of others is relevant to psychological well-being in menopause | -0.421 | -1 | -5 | 3 | 0 |
| 78 | Coping with additional life stage factors is relevant to psychological wellbeing in menopause | -0.472 | -1 | 3 | -1 | -6 |
| 40 | Managing weight is relevant to psychological well-being in menopause | -0.495 | -1 | -5 | 0 | 3 |
| 49 | Knowing that cognitive changes are not due to a brain condition (e.g. dementia) is relevant to psychological well-being in menopause | -0.52 | -1 | -1 | -2 | 0 |
| 61 | Secrecy around the topic is relevant to psychological well-being in menopause | -0.531 | -1 | 1 | 0 | -5 |
| 34 | Having alternative treatments to HRT is relevant to psychological well-being in menopause | -0.572 | -2 | 0 | 0 | -4 |
| 63 | Others making jokes about symptoms is relevant to psychological well-being in menopause | -0.587 | -2 | 2 | -4 | -2 |
| 64 | Empathy from others is relevant to psychological well-being in menopause | -0.596 | -2 | -4 | 0 | 1 |
| 18 | Experiencing feelings of failure is relevant to psychological well-being in menopause | -0.67 | -2 | 0 | -4 | 0 |
| 44 | Duration of menopause stages is relevant to psychological well-being in menopause | -0.673 | -2 | -3 | 1 | -2 |
| 77 | Flexibility and reasonable adjustments at work are relevant to psychological wellbeing in menopause | -0.68 | -2 | -2 | -1 | -1 |
| 80 | Being able to hide symptoms is relevant to psychological well-being in menopause | -0.74 | -2 | 0 | -1 | -4 |
| 11 | Being able to carry on as before is relevant to psychological well-being in menopause | -0.82 | -2 | -3 | -5 | 4 |
| 47 | Experiencing memory problems is relevant to psychological well-being in menopause | -0.824 | -3 | 2 | -2 | -6 |
| 1 | Prior knowledge about menopause is relevant to psychological well-being in menopause. | -0.858 | -3 | -4 | 1 | -2 |
| 42 | Feeling unwell is relevant to psychological well-being in menopause | -0.872 | -3 | -2 | -3 | 0 |
| 35 | Anxiety is relevant to psychological well-being in menopause | -0.949 | -3 | -1 | -2 | -3 |
| 70 | Social messages about HRT are relevant to psychological well-being in menopause | -0.966 | -3 | -2 | -1 | -3 |
| 30 | Not giving in to symptoms is relevant to psychological well-being in menopause | -0.991 | -3 | -2 | -2 | -2 |
| 45 | Predictability of symptoms is relevant to psychological well-being in menopause | -1.166 | -4 | -1 | -5 | -1 |
| 46 | Visibility of symptoms to others is relevant to psychological well-being in menopause | -1.26 | -4 | -1 | -3 | -4 |
| 14 | Experiencing feelings of dread is relevant to psychological well-being in menopause | -1.266 | -4 | -4 | -4 | 1 |
| 67 | Attitudes of men are relevant to psychological well-being in menopause | -1.413 | -4 | -7 | 1 | -2 |
| 31 | Using humour to cope is relevant to psychological well-being in menopause | -1.42 | -5 | -6 | -1 | -1 |
| 65 | Validation from others is relevant to psychological well-being in menopause | -1.505 | -5 | 0 | -3 | -7 |
| 15 | Experiencing feelings of fear is relevant to psychological well-being in menopause | -1.772 | -5 | -3 | -3 | -5 |
| 37 | Experiencing migraines is relevant to psychological well-being in menopause | -1.923 | -6 | -2 | -5 | -5 |
| 6 | Feeling able to perform well at work/ in role is relevant to psychological wellbeing in menopause | -2.031 | -6 | -4 | -6 | -2 |
| 17 | Experiencing feelings of embarrassment is relevant to psychological well-being in menopause | -2.544 | -7 | -6 | -6 | -3 |

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| --- | --- | --- |
| factor 5 | Sorts Weight | |
|  |  |  |
| Q-sort | Weight |  |
| P5 | 4.31413 |  |

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| --- | --- | --- |
| factor 5 | Sorts Correlations | |
|  |  |  |
| Q-sort | P5 |  |
| P5 | 100 |  |

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|  | Factor Scores for factor 5 |  |  |  |
|  |  |  |  |  |
| Statement Number | Statement | Z-score | Sort Values | Raw Sort P5 |
| 19 | Experiencing feelings of loss is relevant to psychological well-being in menopause | 2.332 | 7 | 7 |
| 10 | Being taken seriously is relevant to psychological well-being in menopause | 1.999 | 6 | 6 |
| 51 | Experiencing feelings of distress or suffering is relevant to psychological well-being in menopause | 1.999 | 6 | 6 |
| 3 | Recognising changes as menopause is relevant to psychological well-being in menopause | 1.665 | 5 | 5 |
| 7 | Being able to function day to day is relevant to psychological wellbeing in menopause | 1.665 | 5 | 5 |
| 72 | Seeing menopause as a natural process is relevant to psychological well-being in menopause | 1.665 | 5 | 5 |
| 4 | Being able to manage emotions is relevant to psychological well-being in menopause | 1.332 | 4 | 4 |
| 5 | Feeling in control is relevant to psychological well-being in menopause | 1.332 | 4 | 4 |
| 39 | Experiencing hot flushes is relevant to psychological well-being in menopause | 1.332 | 4 | 4 |
| 53 | Perceived loss of youth is relevant to psychological well-being in menopause | 1.332 | 4 | 4 |
| 57 | Support from healthcare professionals is relevant to psychological well-being in menopause | 0.999 | 3 | 3 |
| 66 | Attitudes of other women are relevant to psychological well-being in menopause | 0.999 | 3 | 3 |
| 69 | Social attitudes to women are relevant to psychological well-being in menopause | 0.999 | 3 | 3 |
| 71 | Confidence in physical appearance is relevant to psychological well-being in menopause | 0.999 | 3 | 3 |
| 75 | Seeing menopause as the start of a new life stage is relevant to psychological well-being in menopause | 0.999 | 3 | 3 |
| 77 | Flexibility and reasonable adjustments at work are relevant to psychological wellbeing in menopause | 0.999 | 3 | 3 |
| 8 | Coping with physical symptoms is relevant to psychological wellbeing in menopause | 0.666 | 2 | 2 |
| 20 | Feeling different from before is relevant to psychological well-being in menopause | 0.666 | 2 | 2 |
| 23 | Having a positive outlook is relevant to psychological well-being in menopause | 0.666 | 2 | 2 |
| 24 | Physical exercise is relevant to psychological well-being in menopause | 0.666 | 2 | 2 |
| 34 | Having alternative treatments to HRT is relevant to psychological well-being in menopause | 0.666 | 2 | 2 |
| 35 | Anxiety is relevant to psychological well-being in menopause | 0.666 | 2 | 2 |
| 56 | Support from family and friends is relevant to psychological well-being in menopause | 0.666 | 2 | 2 |
| 76 | Feeling free from menstruation is relevant to psychological well-being in menopause | 0.666 | 2 | 2 |
| 15 | Experiencing feelings of fear is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 17 | Experiencing feelings of embarrassment is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 18 | Experiencing feelings of failure is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 29 | Taking part in enjoyable activities is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 31 | Using humour to cope is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 49 | Knowing that cognitive changes are not due to a brain condition (e.g. dementia) is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 55 | Support at work is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 60 | Feeling able to talk about it to others is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 62 | Responses of others is relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 68 | Social attitudes to ageing are relevant to psychological well-being in menopause | 0.333 | 1 | 1 |
| 6 | Feeling able to perform well at work/ in role is relevant to psychological wellbeing in menopause | 0 | 0 | 0 |
| 13 | Believing that something can help is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 21 | Knowing what help is available is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 25 | Practising self-care is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 26 | Making lifestyle adjustments is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 27 | Accepting the experience is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 30 | Not giving in to symptoms is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 40 | Managing weight is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 48 | Experiencing problems with thinking clearly is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 54 | Support from partner is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 67 | Attitudes of men are relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 74 | Seeing menopause as an abnormal state is relevant to psychological well-being in menopause | 0 | 0 | 0 |
| 1 | Prior knowledge about menopause is relevant to psychological well-being in menopause. | -0.333 | -1 | -1 |
| 11 | Being able to carry on as before is relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 22 | Seeking help is relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 38 | Experiencing disturbed sleep is relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 46 | Visibility of symptoms to others is relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 50 | Experiencing emotional changes is relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 59 | Sexual desire and sensation are relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 61 | Secrecy around the topic is relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 78 | Coping with additional life stage factors is relevant to psychological wellbeing in menopause | -0.333 | -1 | -1 |
| 80 | Being able to hide symptoms is relevant to psychological well-being in menopause | -0.333 | -1 | -1 |
| 9 | Coping with psychological symptoms is relevant to psychological wellbeing in menopause | -0.666 | -2 | -2 |
| 16 | Experiencing feelings of hopelessness is relevant to psychological well-being in menopause | -0.666 | -2 | -2 |
| 28 | Talking to other menopausal women is relevant to psychological well-being in menopause | -0.666 | -2 | -2 |
| 44 | Duration of menopause stages is relevant to psychological well-being in menopause | -0.666 | -2 | -2 |
| 47 | Experiencing memory problems is relevant to psychological well-being in menopause | -0.666 | -2 | -2 |
| 63 | Others making jokes about symptoms is relevant to psychological well-being in menopause | -0.666 | -2 | -2 |
| 65 | Validation from others is relevant to psychological well-being in menopause | -0.666 | -2 | -2 |
| 79 | Depression is relevant to psychological well-being in menopause | -0.666 | -2 | -2 |
| 12 | Hearing about the experiences of others is relevant to psychological well-being in menopause | -0.999 | -3 | -3 |
| 41 | Experiencing pain is relevant to psychological well-being in menopause | -0.999 | -3 | -3 |
| 42 | Feeling unwell is relevant to psychological well-being in menopause | -0.999 | -3 | -3 |
| 58 | Maintaining sexual relationships is relevant to psychological well-being in menopause | -0.999 | -3 | -3 |
| 64 | Empathy from others is relevant to psychological well-being in menopause | -0.999 | -3 | -3 |
| 73 | Acknowledgement of menopause as a significant milestone is relevant to psychological well-being in menopause | -0.999 | -3 | -3 |
| 14 | Experiencing feelings of dread is relevant to psychological well-being in menopause | -1.332 | -4 | -4 |
| 33 | Taking HRT is relevant to psychological well-being in menopause | -1.332 | -4 | -4 |
| 52 | Loss of fertility is relevant to psychological well-being in menopause | -1.332 | -4 | -4 |
| 70 | Social messages about HRT are relevant to psychological well-being in menopause | -1.332 | -4 | -4 |
| 32 | Feeling concerned about risks of HRT is relevant to psychological well-being in menopause | -1.665 | -5 | -5 |
| 43 | Experiencing bladder/bowel changes is relevant to psychological well-being in menopause | -1.665 | -5 | -5 |
| 45 | Predictability of symptoms is relevant to psychological well-being in menopause | -1.665 | -5 | -5 |
| 36 | Coping with side effects of medication is relevant to psychological well-being in menopause | -1.999 | -6 | -6 |
| 37 | Experiencing migraines is relevant to psychological well-being in menopause | -1.999 | -6 | -6 |
| 2 | Feeling prepared for the onset of symptoms is relevant to psychological well-being in menopause | -2.332 | -7 | -7 |

APPENDIX 13 - Author submission guidelines

**Aims and scope**

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Through a variety of disciplines and a blend of scholarly and clinical articles, the ***Journal of Women & Aging***provides practitioners, educators, researchers, and administrators with a comprehensive guide to the unique challenges facing women in their later years.

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*Updated 15-10-2019*

APPENDIX 14 – Glossary of terms

**Glossary of terms**

|  |
| --- |
|  |

* **Pre-menopause** refers to the span of time from onset of menstrual periods to perimenopause.
* **Perimenopause** refers to the transitional process of physical changes in the years leading up to menopause, lasting between four to eight years and ending 12 months after the final menstrual period.
* **Menopause** refers to 12 consecutive months since the final menstrual period (with no other obvious causes).
* **Early** **menopause** refers to menopause that occurs earlier than the normal range of menopause, at or before the age of 40, due to genetics, autoimmune disorders, or medical or surgical procedures or treatments.
* **Post-menopause** refers to the span of time after menopause.
* **Surgical menopause** refers to menopause that occurs following surgical removal of the ovaries for medical reasons. Surgical menopause can occur at any age before spontaneous menopause. To differentiate this term from ‘induced menopause’ (below), within this study, this will be referred to as ’surgically induced’ menopause.
* **Induced menopause** refers to menopause that occurs earlier than expected when both ovaries are permanently damaged, for example by cancer treatments.
* **HRT** is the acronym for hormone replacement therapy, which is a treatment used to relieve symptoms of the menopause. It replaces hormones that are at a lower level. (NHS, 2019).

**Chapter 3: Executive Summary**

Exploring Psychological Well-Being in Menopause.

Word count: 1927

**EXPLORING PSYCHOLOGICAL WELL-BEING IN MENOPAUSE.**

**Explanation of Terms**

|  |  |
| --- | --- |
| Pre-menopause | * The time from the start of menstrual periods to the time when changes which lead up to menopause begin. |
| Perimenopause | * The stage when a series of physical changes in the years leading up to menopause occur. Perimenopause can last, on average, between four to eight years. It varies between women. |
| Menopause | * The stage when a woman has not had a menstrual period for 12 consecutive months (with no other obvious causes). The average age of menopause is 51 years. |
| Early menopause | * When menopause occurs earlier than is normally expected, at or before the age of 40. This can be due to genetics, autoimmune system problems, or medical procedures or treatments. |
| Post-menopause | * The period of time after menopause. |
| Surgical menopause | * Menopause that occurs following surgical procedures, such as hysterectomy. |
| Induced menopause | * Menopause that occurs earlier than expected due to the effects of medications or treatments. |
| HRT | * Hormone Replacement Therapy is a treatment used to relieve symptoms of menopause by increasing levels of hormones which reduce in the body during menopause. |
| Psychological well-being | * Within this study, well-being is defined as the psychological, social and physical resources a person has balanced with the psychological, social and physical challenges they face. |

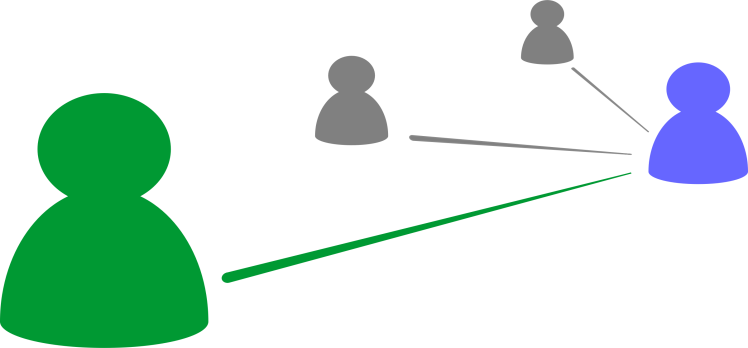
**Background**

**Menopause is a natural process of ageing** and refers to the female life stage when the body begins to produce less oestrogen, which means that reproductive function gradually stops. **Menopause usually occurs between 45 and 55 years of age.** The average age of menopause for women in the UK is 51 years. For some women, menopause occurs earlier. This can be for a range of reasons, such as genetics or as a result of some surgical or medical treatments.

**Menopause is associated with a range of symptoms** which can begin months or years before reproductive function actually stops. Symptoms usually last an average of four years after a woman has reached menopause, though can sometimes be experienced for much longer.

**Many women experience a range of physiological, emotional and psychological changes due to the menopause process.** There can be a great deal of variation between women in the severity of menopause symptoms and how the menopause process is experienced. **Some women experience few problems, other women experience significant problems** and menopause can be a source of distress.

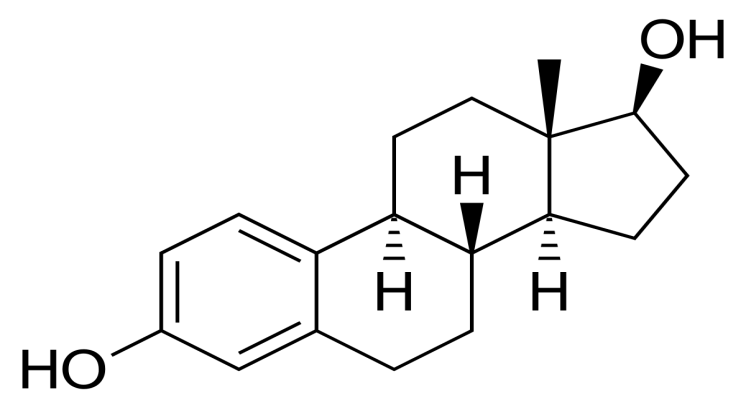
***Social, physical, and psychological*** factors are thought to be relevant to psychological well-being in menopause.

 ***Social***

Research has found that social factors which may be relevant to psychological well-being in menopause include social attitudes to women, support from others during the menopause process and what women believe other people think about menopause. Negative beliefs and attitudes around menopause in society can mean that menopause is seen as a taboo topic or that there is stigma related to menopause. This can impact on women’s ability to seek support and affect the availability of support. Some research has found that for some women who experience difficulties related to menopause, lack of understanding and support from others can affect their attendance at work and can lead them to isolate themselves.

*** Psychological***

Psychological symptoms can include depression, anxiety, irritability, mood difficulties, reduced confidence and problems with memory and concentration. Women can be at increased risk of depression at earlier menopause stages. Psychological symptoms can affect psychological well-being more than physical symptoms.

*** Physical***

Oestrogen

Physical changes during menopause can result in a range of unpleasant symptoms. Hot flushes, sleep disturbance and fatigue can be some of the most problematic physical symptoms for women and can lead to other problems in their day to day lives.

Although the process of menopause has biological origins, the experience of menopause and related distress is not entirely explained by physiological changes and symptoms.

Understanding factors which can affect psychological well-being is complex, because of the range of factors which may be involved and the range of differences between individual women.

The views of people who have experience of menopause and the views of people who do not are of interest within this research. Although the menopause is related to biological life stage changes, the difficulties some women experience is not entirely explained by these changes. The average age of menopause is also the age at which suicide risk for women in the UK is highest. Women aged 50-54 years had the highest suicide rate amongst women in 2017. Research which may add to what is known about what is important to psychological well-being in menopause may be helpful in improving support for those women who are struggling during this life stage.

**Purpose - Why was the study done?**

This study aimed to explore a range of different views about what is important to psychological well-being in menopause.

The study wanted to ask people to give their view on the topic by ranking statements about psychological well-being in menopause, in the order of importance which best reflects what they think. This way of finding out people’s views is known as Q-methodology. It enables researchers to look at individual views and also to look at ways in which people’s views may be similar or different.

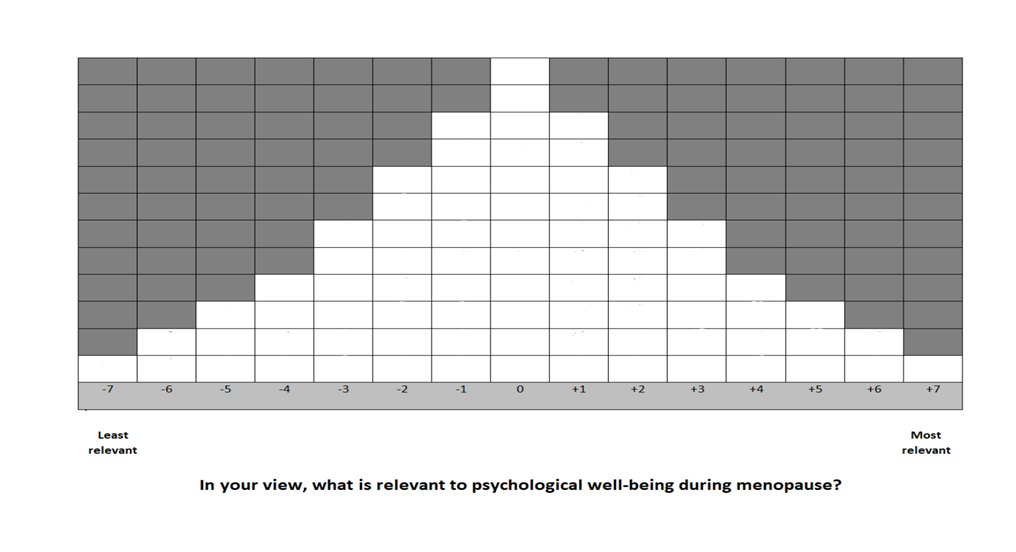
The findings of this study will add to what is already known about menopause, help to improve the help that is available to women and develop better understandings of menopause.

**Method - What did the study involve?**

Staffordshire University approved this research study. 80 statements which women said were relevant to psychological well-being in menopause were generated.

These statements came from previous research, from surveys, from media articles about menopause and from a focus group discussion with five women who had experience of menopause.

A grid, known as a Q-sort grid, was created for the statements to be placed on, in order of what is most relevant to least relevant. The grid is shown below in Figure 1.



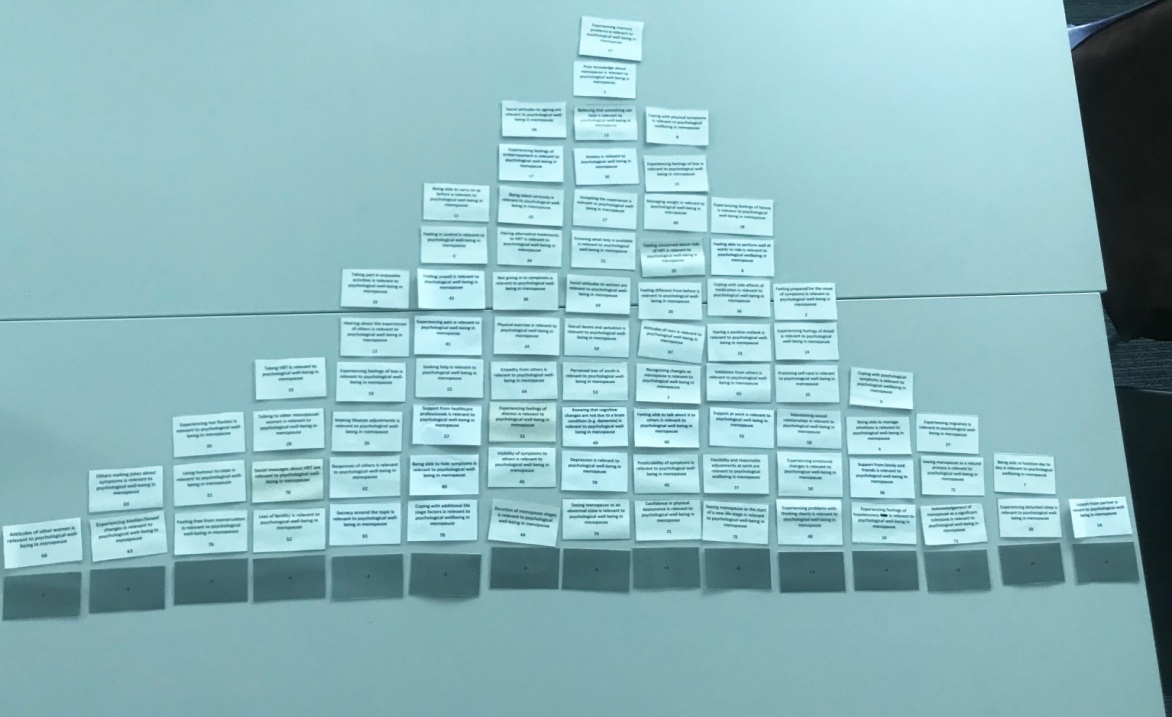
***Figure 1: The Q sort grid and research question***

The 80 statements, known as the Q-set, included themes such as relationships, attitudes of others, meanings of menopause, work and life roles, knowledge about menopause, types of support, feelings, ways of coping, identity, symptoms and treatment.

**Participants**

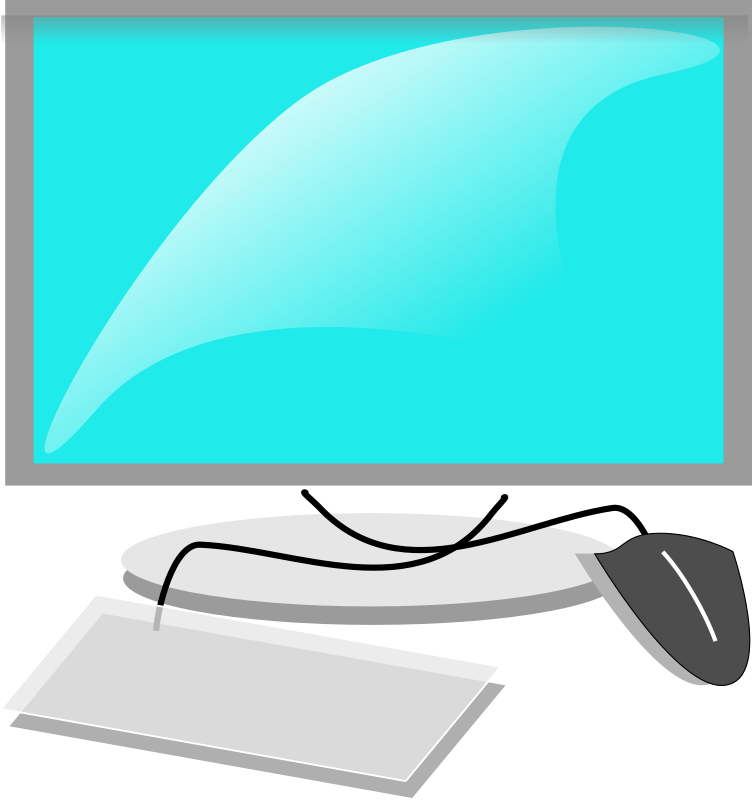
Participants were recruited using posters displayed on campus at Staffordshire University to advertise the study. People with or without experience of menopause who were over the age of 18 were eligible to be included. Seventeen people agreed to take part in the study. They were aged between 26 and 59 years, fifteen were female and two were male.

The researcher met individually with participants at the University to complete the Q-sort. The Q-grid was set out by the researcher and participants were given the Q-set of 80 individual statement cards. They were asked to sort the statements, from least relevant to most relevant, to reflect their view of what is relevant to psychological well-being in menopause. Participants placed one statement in each box of the distribution grid.

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***Figure 2: An example of a completed Q-sort***

**Analysis**

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* **The Q-sorts were analysed using a computer software package called Ken-Q, to look closely at what the people who took part said was important.**
* **The researcher looked at the ways in which different people agreed and disagreed about what they thought is relevant to psychological well-being in menopause.**
* **Five different types of viewpoint were identified, these are known as factors.**

**Findings - What did the study show?**

Some statements were seen as similar in importance to all five of the viewpoints, meaning that they were placed in a similar way by the people who took part.

These were:

* Believing that something can help
* Making lifestyle adjustments
* Secrecy around the topic
* Confidence in physical appearance
* Coping with additional life stage factors

**Different Viewpoints:**

**Viewpoint 1**: Going it alone

People with this viewpoint valued being able to function and having control. There was a focus on problems with memory and thinking and problems with feelings and mood. Sleep problems were important .

Most Important:

* being able to function day to day
* knowing that cognitive changes are not due to a brain condition
* experiencing problems with thinking clearly
* experiencing memory problems

Least Important:

* support from healthcare professionals
* social attitudes to ageing
* and feeling free from menstruation

\*Represented a perimenopause perspective

**Viewpoint 2:** Resilience and reaching out

This viewpoint valued coping, functioning, keeping going and feeling supported.

Most Important:

* feeling free from periods
* support and empathy from other people
* a positive outlook and using humour
* talking to other women

Least Important:

* support from healthcare professionals
* social attitudes to women and ageing
* being able to hide symptoms
* seeing menopause as abnormal

\*Represented a post-menopause perspective

**Viewpoint 3**: External solutions and treatment

This viewpoint said physical symptoms were most important, and emotions and problems with thinking. It highlighted healthcare and treatment, support from others and social attitudes.

Most Important:

* experiencing hot flushes
* bladder & bowel changes
* medication side effects
* duration of menopause

Least Important:

* recognising changes as menopause
* accepting the experience
* seeing menopause as a natural process
* practising self-care

\*Represented a menopause/surgical menopause perspective

**Viewpoint 4:** Resources, knowledge and proactivity

This viewpoint said physical and psychological symptoms, treatment, support, talking about menopause and social attitudes were important.

Most Important:

* concerns about risks of HRT
* support from a partner
* feeling able to talk to others
* loss of fertility

Least Important:

* embarrassment
* feelings of fear or embarrassment
* using humour
* performing well at work

\*Represented an early menopause perspective

**Viewpoint 5:** Support, validation, empathy

This viewpoint highlighted emotions, physical and cognitive symptoms, attitudes and responses of others, and support and work related statements as important.

Most Important:

* experiencing feelings of loss
* experiencing feelings of distress
* being taken seriously
* perceived loss of youth

Least Important:

* Feeling prepared for the onset of symptoms

\*Represented a perspective of significant difficulties

**Summary**

* The different viewpoints show that what people think is relevant to psychological well-being in menopause can vary.
* Menopause stage, individual differences and social factors may affect viewpoints.
* Perimenopause – difficulties with emotions, thinking clearly, functioning and mood were more relevant than at other menopause stages.
* Menopause and surgical menopause – physical symptoms, treatment and support from health professionals was more important.
* Post-menopause – Support from others, enjoyment and carrying on were identified as more important to psychological well-being than problems with thinking, feelings and physical changes.
* There was some variation in the views of postmenopausal women which did not seem to be related to whether menopause was early or at the expected age. A range of other factors this study did not look at may be involved.
* There was a difference between what perimenopausal women said was important compared to other women.
* Viewpoints which said social support, enjoyment and carrying on were important did not highlight problems with thinking, feelings and physical changes as important.
* Viewpoints who said that problems with thinking, feeling and physical changes were important did not contain as many statements about social support.

**Recommendations – how can the findings be used?**

**Helping women**

* Increase education around things which are important to psychological well-being in menopause
* Improve social understandings and attitudes to menopause
* Increase social support and connection for women who are struggling
* Help women to share their experiences, learn from each other and develop peer support networks
* Explore new ways for women who are struggling to cope with the range of potential difficulties during menopause stages

**Further research**

* Further research about psychological well-being in menopause outside of the University, with a broader range and variety of people.
* Further research which takes differences between people such as personality or history into account.
* Further research with more nuanced groups, building on the findings of the focus group and what is relevant at menopause stages.

**This executive summary is designed for general dissemination to a public audience.**

**It is designed for electronic or paper publication.**

**Sources of Information and Support**

NHS Information on menopause is available at: <https://www.nhs.uk/conditions/menopause/>

The Menopause Support Network is a social media group where women experiencing menopause can come together to support each other through this time in their lives and share what helps them. <https://www.facebook.com/groups/384849495215750/?ref=group_header>

The Daisy Network is a not for profit organisation which offers information and support for early menopause <https://www.daisynetwork.org.uk/>