CHANGING BODIES: SYMPTOMS, BODY IMAGE, HEALTH AND WELLBEING OVER THE MENOPAUSAL TRANSITION

By

Gemma Pearce, MSc

Primary supervisor: Dr Cecilie Thøgersen-Ntoumani

Secondary supervisor: Professor Joan L. Duda

A thesis submitted to the University of Birmingham for the degree of

DOCTOR OF PHILOSOPHY

School of Sport and Exercise Sciences

College of Life and Environmental Sciences

University of Birmingham, UK

Submission: 27th March 2013; Award confirmation 11th July 2013

ABSTRACT

Aim: To undertake exploratory work examining the relationship between menopausal symptoms, body image, exercise and wellbeing.

Method: A mixed methods approach was used, including a systematic scoping review, the development of a synchronous text-based online interviewing tool; a qualitative Interpretative Phenomenological Analysis study, and mixed methods study.

Results: The review showed that women's experiences of the menopause and body image can be both positive and negative simultaneously, which has implications for the way these concepts are quantitatively measured. A synchronous online interviewing tool is an additional method to be added to the researchers' tool kit, especially if the topic is sensitive and an extra level of anonymity is needed. The IPA study focused on experiences of body image concerns and identified a range of ways menopausal women cope with such changes. Through Structural Equation Modelling and interviews, we identified that menopausal symptoms may act as a barrier to exercise participation by decreasing a woman's subjective vitality, and reducing perceptions of attractiveness, life satisfaction and self-esteem.

Conclusion: Health psychology of the menopausal transition is in its infancy. It is not only important to consider methods to reduce symptoms, but also the impact symptoms have on health behaviour, body image and wellbeing.

ACKNOWLEDGEMENTS

Thank you so much to all who supported me through this doctoral work. Of course it is difficult to succinctly capture the true amount of amazing things that the following people have done for me but here is my attempt. I'd like to start by thanking those at the University of Birmingham, especially to the School of Sport and Exercise Sciences for funding my PhD and Cecilie for taking me on as her first doctoral student. I have learnt many new skills as a result of the challenges she has put forward to me and I would like to thank her for the invaluable opportunities she provided for me to gain research, networking and publication experience, and present this doctoral work at national and international conferences (leading to an oral presentation award). I would like to thank Joan for her expertise and guidance in this research, especially when asking the big important questions. Also thank you to Professor Nikos Ntoumanis for being an unofficial third supervisor, who provided advice, support and opportunities for me during my time in Birmingham (co-author of chapter 5). What makes this school and University so special is the provision of support and the facilitative environment. My mentor, Dr. Oliver Witard was there whenever I had questions or needed to talk. My office mates kept me sane, and gave me constant advice and support. The psychology group provided a platform to express ideas, critique research, present work and work towards publication. The school contains many other PhD students to discuss problems and celebrate successes with, a supportive administration team and many expert members of staff. This keeps such a high standard of research and I'd like to say how much I appreciate everyone's support in that team.

For those external to the University of Birmingham, I'd like to start by thanking Dr. Jim McKenna at Leeds Metropolitan University for his professional input and patient words of encouragement (co-author of chapter 4). My research would not have been possible

without the women who volunteered to participate in this research. Thank you so much for sharing your priceless expertise and experiences regarding the menopausal transition. During my doctoral work, I've also had some very useful conversations with those involved in the same field of research. Professor Myra Hunter, Dr. Eleanor Mann and Dr. Beverley Ayers invited me to present some of this doctoral work as part of the health psychology seminar series in the Institute of Psychiatry in Kings College London. This was a very useful tool for reflection and they greeted me with such enthusiasm and interest that it acted as an inspirational boost in the middle of my doctoral research. I'd like to thank Helena Rubenstein who is carrying out doctoral work on women's attitudes towards the body and treatment seeking during the menopause at the University of Cambridge. She came to visit me and generously shared an advance copy of her mixed methods work to be included in the systematic review (chapter 2 of the thesis). Sue Brayne's work also deserves acknowledgement - she has written a well researched and inspiring book for women experiencing the menopause (and men who know someone experiencing the menopause). I have enjoyed our discussions and her blog, and she now runs group seminars for psychiatrists and women experiencing the menopause to spread knowledge and reduce the stigma associated with the menopause. A big thank you goes to Professor Richard Bailey who hired me as a research assistant at the University of Roehampton for two years prior to my PhD and prepared me more than I could have hoped to carry out doctoral work. He has provided valuable feedback on my work and much intellectually stimulating discussion. Richard is a priceless mentor and friend, whose input has been vital to my progression over the last 7 years.

If it were not for my parents' love and encouragement, I would not have the drive, endurance and strength to achieve this accomplishment and follow my passion. I find it hard to put into words everything that my parents have done for me, but they are the reason I care

about the things that I do, the reason I think critically and question everything, and the reason I have a thirst for knowledge and understanding. I would like to specifically thank my mum for helping me recruit participants, and for the extremely valuable insight and discussions on how the participants may feel about and react to the research. Thank you to my partner, Jamie, for being there for me, loving me for who I am, proof reading all my work and letting me talk at him while reflecting on my research. Thank you to all of my friends and family for putting up with me rambling on about things that they do not understand and my lack of socialisation during the PhD work. Special thanks to Rachael Bradley, Matthew Hughes, Flo Kinnafick and Dr. Vivek Nallur for being great friends, you each know what you have done for me. If I haven't mentioned something, it's not because I do not appreciate it, it's because you have all done so much. Thank you.

ABBREVIATIONS

Aural-IM – aural-based (speaking to each other) Instant Messaging (e.g., microphone)

BPS – British Psychological Society

BSO - Bilateral-Salpingo Oopherectomy

EQS – Equations SoftwareHRT - Hormone Replacement Therapy

IM – Instant Messaging

IMS - International Menopause Society

IPA - Interpretative Phenomenological Analysis

IT – Internet Technology

MET - Metabolic Equivalent of Task

MHPN – Midlands Health Psychology Network

MSN - Microsoft Network

NIH - National Institute of Health

NHS – National Health Service

S-B $\chi 2$ - Satorra-Bentler scaled chi square statistic

SEM – Structural Equation modelling

SPSS/PASW – Software Package for the Social Sciences

Text-IM – text-based (typing to each other) Instant Messaging

UK – United Kingdom

Visual-IM – visual-based (seeing each other) Instant Messaging (e.g., webcam)

WHO – World Health Organisation

WHQ – Women's Health Questionnaire

$\chi 2$ - chi square statistic

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PUBLICATIONS AND PRESENTATIONS

Papers accepted for publication directly from this doctoral research

Pearce, G., Thøgersen-Ntoumani, C., & Duda, J. L. Body image during the menopause: A systematic scoping review. *Health Psychology Review.* (Chapter 2)

Pearce, G., Thøgersen-Ntoumani, C., & Duda, J. L. The development of Instant Messenger as an online interviewing tool. *International Journal of Social Research Methods.* (Chapter 3)

Pearce, G., Thøgersen-Ntoumani, C., Duda, J. L. & McKenna, J. Changing bodies: An Interpretative Phenomenological Analysis of women's experiences of surgical menopause. *Qualitative Health Research.* (Chapter 4)

Published conference abstract arising from this doctoral research

Pearce, G., Thøgersen-Ntoumani, C., Duda, J. (2010) The interplay between menopausal symptomatology and perceived attractiveness to understanding psychological well-being and physical activity behaviour in menopausal women, European Health Psychology Society Conference, *Psychology and Health*, 25 (supplement 1) 69-70, doi: 10.1080/08870446.2010.502659

Conference presentations arising from this research

Pearce, G., Thøgersen-Ntoumani, C., Duda, J. & McKenna, J. (2011) Changing bodies: women's embodied experiences of the menopausal transition, *Division of Health Psychology Annual Conference (BPS),* University of Southampton, UK (poster presentation).

Pearce, G., Thøgersen-Ntoumani, C., Duda, J. & McKenna, J. (2011) Changing bodies: women's embodied experiences of the menopausal transition, Kings College London, UK (invited talk).

Pearce, G., Thøgersen-Ntoumani, C., Duda, J. & McKenna, J. (2011) Changing bodies: women's embodied experiences of the menopausal transition, Postgraduate Researchers Day, University of Birmingham, UK (oral presentation).

Pearce, G., Thøgersen-Ntoumani, C., & Duda, J. (2010) Menopausal experiences, body image and physical activity behaviour. *European Health Psychology Society Conference*: Babeş-Bolyai University, Romania (oral presentation).

Pearce, G., Thøgersen-Ntoumani, C., Duda, J. & McKenna, J. (2010) The menopausal transition in women who have had a hysterectomy: from embarrassment to liberation. *Midlands Health Psychology Network Conference*: Coventry University, UK (oral presentation).

Pearce, G., Thøgersen-Ntoumani, C., & Duda, J. (2009). The role of perceived attractiveness in the relationship between menopausal symptomatology, physical activity behaviour and psychological wellbeing. *Postgraduate Researchers Day,* University of Birmingham, UK (oral presentation).

Pearce, G., Thøgersen-Ntoumani, C., & Duda, J. (2008). Examining the process by which self-presentation and motivation for physical activity relate to physical activity behaviour and psychological wellbeing during the menopausal transition: a longitudinal study. *Postgraduate Research Day:* University of Birmingham, UK (poster presentation).

Awards as a result of this research

Midlands Health Psychology Network Conference Best Oral Presentation. Award, Coventry University, UK (2010).

Related publications and presentations during this doctoral research

Templin, T. & **Pearce, G**. (2012). Reviewing Literature. In K. Armour & D. MacDonald (Eds). *Research Methods in Physical Education and Youth Sport*, London: Routledge.

Thøgersen-Ntoumani, C., Ntoumanis, N., & Cumming, J., Bartholomew, K., & **Pearce, G**. (2011) Can self-esteem protect against the deleterious consequences of self-objectification for mood and body satisfaction? An experimental study with physically active female University students. *Journal of Sport and Exercise Psychology, 33 (2), 289-307.*

Pearce, G. (2009). Systematic Literature Reviewing. *Physical Education and Sports Pedagogy New Researchers Seminar Day (BERA),* University of Birmingham, UK (invited workshop).

CHAPTER 1

Introduction

Women experience many hormonal changes throughout their lives. These range from daily fluctuations and monthly cycles to significant life transitions, such as puberty, pregnancy, childbirth, and menopause. There is a long history of medical research investigating these changes to a woman's body. Hippocrates hypothesised that a woman's womb moves around her body causing the condition he named 'hysteria' (meaning Uterus in Greek) (King, 1993). Today, modern medicine has a more informed view of the changes that occur to a woman's body. However, these changes are accompanied by new demands that involve adaptation and coping (Holmes & Rahe, 1967), and our understanding of the psychological processes involved with these transitions is still relatively limited (Chrisler, 2004).

Puberty and pregnancy are transitions usually associated with positive transformations and outcomes (Chrisler, 2008; Kaufert, 1996; Lock, 1991). In contrast, menopause is thought to produce negative changes as women are stereotyped as becoming depressed, ill and sexually unappealing (Chrisler, 2011; Goffman, 1963). Menopause represents the change from a woman's fertile to non-fertile period, and can be perceived as the transition from a younger to older adult. Similar to the other hormone-related life transitions (Fox, 1997), this bodily change can impact how a woman thinks and feels about herself and her body, and potentially influence health-related and social behaviours, and quality of life as a result (Chrisler, 2007; Chrisler & Ghiz, 1993).

What is menopause?

The menopause is the permanent cessation of menstruation, which occurs as a result of the loss of ovarian follicular activity and is recognised after 12 months of consecutive amenorrhea, for which there is no other obvious cause (World Health Organisation [WHO] scientific group, 1996). The menopause typically occurs naturally between the ages of 45 to 55 (National Institutes of Health (NIH) State-of-the-Science Panel, 2005) or can be induced

as a result of medical treatment (e.g., chemotherapy) or surgery (e.g., undergoing a Bilateral-Salpingo Oopherectomy (BSO) to remove both ovaries[1]). The research presented within this thesis does not just focus on the succinct medical stage of menopause, but also on the larger complex transition surrounding it, which is referred to as the menopausal transition within this thesis.

The menopausal transition encompasses the period of change from perimenopause to postmenopause and its accompanying symptoms (see Figure 1.1). It is also known as the climacteric, which the International Menopause Society (IMS, 1999) define as the ageing transition in women spanning from the reproductive phase to the non-reproductive phase. This includes a variable time period during and after the perimenopause, which can be associated with symptomatology. The perimenopause begins with changes in endocrinological, biological and clinical features associated with an approaching menopause and continues until 12 months following the final menstruation (WHO scientific group, 1996). The reproductive period prior to this stage is referred to as premenopause, which continues until the perimenopausal phase begins. A woman is considered to be postmenopausal following the perimenopause and menopause, however as she can still experience symptoms associated with the menopause, she would still be considered to be experiencing the menopausal transition until after those associated symptoms cease (Garamszegi et al., 1998).

[1] A hysterectomy without BSO does not result in a surgical menopause.

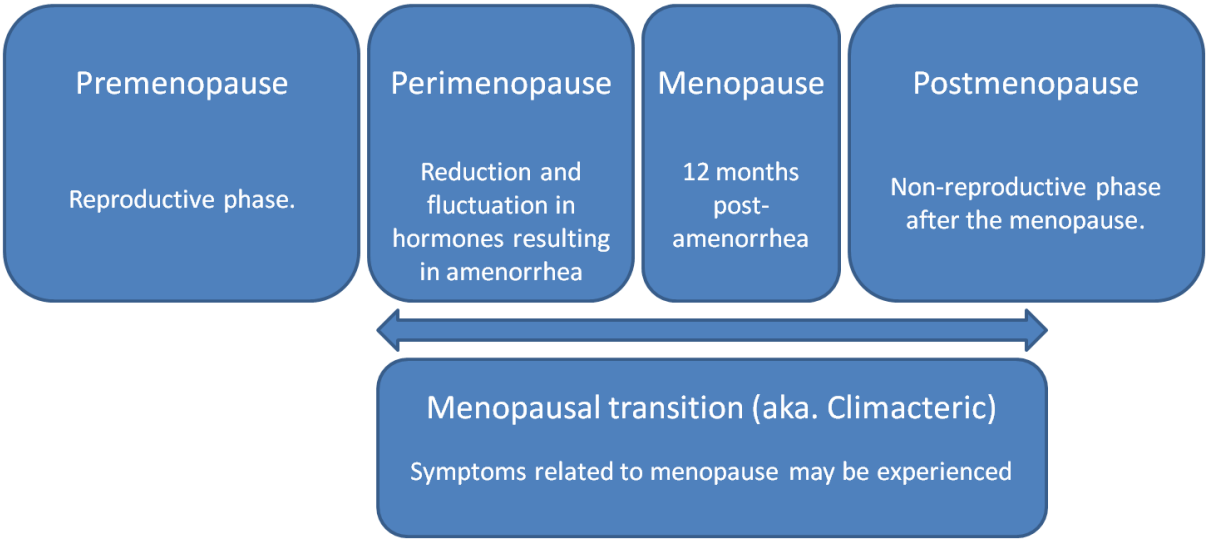

Figure 1.1: The stages of menopause and the menopausal transition.

Symptoms associated with the menopausal transition may be both physical and psychological, including vasomotor symptoms, somatic symptoms, menstrual fluctuations, sleep disturbance, depressed mood, feelings of anxiety, memory, concentration problems and changes in sexual behaviour (Hunter, 1992; Hunter et al., 2012). The vasomotor symptoms (hot flushes and night sweats) are the most reported and commonly linked symptoms associated with the menopausal transition (Nelson, 2008). These are reported by approximately 70% of women in Europe and North America experiencing the menopausal transition, 15-20% of whom perceived them to be problematic (Hunter & Mann, 2010). Other bodily changes associated with the menopausal transition include changes in the skin, hair (Birkhäuser, 2011), weight and body shape (Liang & Ruan, 2009; Singh, Haddad, Knutsen, & Fraser, 2001).

The hormonal changes during the menopausal transition increase a woman's risk of long term conditions, such as depression (Llaneza, García-Portilla, Llaneza-Suárez, Armott, & Pérez-López, 2012; Timur & Şahin, 2010; Turner, Killian, & Cain, 2004), cardiovascular disease (Carels, Darby, Cacciapaglia, & Douglass, 2004; Pérez-López, Chedraui, Gilbert, &

Pérez-Roncero, 2009) and osteoporosis (Guthrie, Dennerstein, Taffe, Lehert, & Burger, 2004; Guthrie, Dennerstein, & Wark, 2000). Therefore, there is a need to identify those who may experience the different symptoms associated with this life transition; who can and cannot cope with these changes and symptoms; and how women can best be supported in healthcare, both during the transition and in reducing future health risk. To better understand this transition, we must first look at the history of theory and research leading to the development of knowledge and healthcare surrounding the menopause.

Menopause and theory

The menopause was originally depicted as a 'deficiency disease' in the early to mid 20th Century (Foxcroft, 2011; Lock, 1982) whereby the woman suffered as a result of the cessation of her ovarian function (Derry, 2002; Dillaway, 2005; Lyons & Griffin, 2003). Presently, the biomedical model of menopause still dominates research. Within this perspective, the menopause is viewed as a condition based on a cluster of physical and emotional problems caused by this hormonal deficiency (Hunter & O'Dea, 2001). Although the menopause is a normative process, to some it feels like an illness with symptoms that can last many years, and has fallen under the medical definition of a long-term condition (Taylor, 2000). Within this view, it is therefore perceived as a diagnosed condition where the symptoms can be treated and managed (Boughton & Halliday, 2008; Kahwati, Haigler, & Rideout, 2005). Some believe it to be a deficiency disease that stops a woman from being 'feminine forever' and in need of a cure (Wilson, 1966).

The menopause has been stigmatised as a negative change in a woman's life due to emotional and physiological changes resulting in the deviance from ideological bodily norms, both in appearance and function (Banister, 2000; Chrisler, 2011; Dillaway, 2005). As a result, Hormone Replacement Therapy (HRT) was developed to solve the 'hormone conundrum'

(Spake, 2004) as a treatment for menopausal problems, to reduce the appearance of ageing (Dillaway, 2005) , limit the decline in physical functioning (Sowers, Pope, Welch, Sternfeld, & Albrecht, 2001; Sowers et al., 2007), and help to reduce functional decline (Tom, Cooper, Patel, & Guralnik, 2012). Further evidence relating to HRT showed an additional benefit of reducing the risk of cardiovascular disease, osteoporosis (Col, Bowlby, & McGarry, 2005; Farquhar, Marjoribanks, Lethaby, Suckling, & Lamberts, 2009) and climacteric depression (Sarkar, 2010). However, subsequent research has found increased risks of breast cancer associated with longer-term HRT use, especially oestrogen-progestin combinations (Bondy, 2005; Van Leeuwen & Rookus, 2003).

Since such findings, the uptake of HRT has fallen substantially and alternative solutions are being sought (e.g., Brett & Keenan, 2007; Kronenberg, 1994; Nedrow et al., 2006; Odiari & Chambers, 2012; M. Taylor, 2002; Thacker, 2011). These range from nursing, such as occupational health (Millonig, 1996); to dietary change and supplementation, such as black cohosh (Betz et al., 2009), soy (Huntley & Ernst, 2004) and wild yam (Komesaroff, Black, Cable, & Sudhir, 2001); to health behaviour uptake, such as yoga (Elavsky & McAuley, 2007a; M. Taylor, Booth-LaForce, Elven, McGrath, & Thurston, 2008) and other forms of physical activity (Daley, Stokes-Lampard, & Macarthur, 2009; 2011; McMillan & Mark, 2004). These are only a few examples, with many more alternative solutions being advocated by a range of practitioners and salespeople, all associated with a varying level of evidence (M. Taylor, 2002).

In the 1990s, there was a rise in the feminist arguement (such as Greer, 1993; Gullette, 1997; Lock, 1998) against the negative stereotype of the menopause as a biological marker for ageing and instead endorsed a sociocultural model. They proposed a natural developmental bodily process where problems associated with the menopausal transition are

largely socially and culturally constructed by negative attitudes towards women's social roles (L. Hall, Callister, Berry, & Matsumura, 2007; Richters, 1997; Shilling, 2008; Winterich & Umberson, 1999). This construction was built on the beliefs that a woman's body is always visible for judgement by others based on male ideals of femininity (Bartky, 1988; Spitzack, 1990). In turn this can negatively impact a woman's perceptions of her body, increasing her body shame and self-objectification, and reducing psychological wellbeing (Fredrickson & Roberts, 1997).

Women may not always have negative experiences of the menopausal transition, and it is important to acknowledge that they may have neutral or positive experiences instead (Dillaway, 2005). Moreover, a woman's satisfaction in her familial and occupational roles depends on her management of role conflict (Stefanisko, 1997), and is predictive of her midlife health status and psychological well-being (Thomas, 1995). Studies have found that women in societies that value older women positively, such as being viewed as nurturers or wise people, report fewer menopausal symptoms and a more positive experience over the transition, compared to societies that hold a negative view of menopause and ageing (Ayers, Forshaw, & Hunter, 2010; Ballard, Elston, & Gabe, 2009).

Women are often unhappy with their physician's guidance and are becoming more sceptical of the medical management of menopausal symptoms, and are not only embracing alternative treatments, but also independent knowledge-building resources (Im, Liu, Dormire, & Chee, 2008). For example, British women experiencing the menopause actively seek and evaluate information independent of their doctor's medical advice (Griffiths, 1999; Jones, 1997; Rymer, Wilson, & Ballard, 2003). However, as self-help books are often biomedically phrased (Lyons & Griffin, 2003), readers do not always obtain the information they need. The increase of self-management behaviours can be a positive change as it is generally

considered from a holistic approach focussing on empowerment, and increasing perceptions of control and confidence to deal with medical, role and emotional management of a chronic condition (Lorig & Holman, 2003). However, there is a dearth of evidence-based information and interventions available to support self-management, which in turn restricts the choices women have regarding their menopausal transition (Dillaway, 2005; Lyons & Griffin, 2003; Odiari & Chambers, 2012; Spake, 2004).

These two opposing models of menopause (biomedical and feminist) lack practical utility as they do not acknowledge that as well as the biological changes and sociocultural contexts, individual variation of experience has a large influence a woman's menopausal transition and quality of life (Hunter & O'Dea, 2001). Battles of the different perspectives can cause frustration for women who are trying to understand the menopausal transition (Goldstein, 2000), with women often receiving confusing and conflicting information (Marnocha, Bergstrom, & Dempsey, 2011). The biopsychosocial model is therefore a useful approach that takes into account biological processes, sociocultural influences and psychological factors relating to the menopausal transition (Dodson & Steiner, 2002; Hall et al., 2007; Hunter & Rendall, 2007; Vitiello, Naftoilin, & Taylor, 2007). This approach allows researchers to delve into topics of cognition, perception and behaviour as a result of biological changes within their sociocultural context, with the aim of providing holistic support to those experiencing the menopausal transition (Price, 2010). Although previous biomedically-focussed research has examined bodily changes, and social constructionists have examined the discourse associated with 'the change' (Watson, 2000), there is a lack of appreciation for a woman's embodied interpretation of the lived-body (Frank, 1996; Stephens, 2001), and the meaning she attributes to bodily changes (Daly, 1995; Hunter, 1996; Jones, 1994).

The body

The work in this thesis is based on the philosophy that as embodied beings, the body acts as a medium to our perceptions of the body (Merleau-Ponty, 1962). We often become more conscious of the body as a physical entity when it dysfunctions and experiences symptoms (Leder, 1990), creating a heightened awareness of the physical self (Frank, 1995, 1996, 2002). Therefore, it is not just cultural influences that are important to a woman's menopausal attitude, but also individual convergence and divergence from others (Utz, 2011). Body image is the embodied psychological experience, which involves perceptions of the body, its attractiveness and capabilities (Cash, 2004; Cash & Pruzinsky, 2002; Fisher, 1986). A woman's body image, health and chronic condition should be considered in relation to the medical, individual and social 'body maps' (biopsychosocial influences) in order to offer the most suitable form of support in practice (Helman, 1995).

Menopause can be closely associated with the ageing process (Deeks & McCabe, 2001), creating feelings of conflict between the outer self and the morbidity of ageing, and the inner self who still feels young and/or approaches the next stage of life with anticipation and positivity (Perz & Ussher, 2008; Schultz-Zehden, 2004). An individual's experience of the menopausal transition can largely depend on her psychological appraisal (Lazarus & Folkman, 1984) of this complex biographical disruption (Bury, 1982, 1991) and the coping styles she uses to deal with it (Pramataroff, Leppert, & Strauss, 2007; Simpson & Thompson, 2009; Vanwesenbeeck, Vennix, & Van de Wiel, 2001). The menopausal transition may be amplified by the grief of a changed body image, and women who experience a higher level of vasomotor symptoms have reported a higher amount of catastrophising thoughts and negative self-definitions (Reynolds, 1997). Feeling in control over symptoms may help to ease those experiencing them (Skinner, 1995), and therefore, there has been an exponential increase in

psychological interventions aimed at addressing menopausal symptoms (Rao, 2009), including counselling (Reynolds, 1997), cognitive behaviour therapy (Ayers, Smith, Hellier, Mann, & Hunter, 2012; Balabanovic, Ayers, & Hunter, 2012), psychoeducation (Tremblay, Sheeran, & Aranda, 2008), exercise (Daley et al., 2009; 2011; Duijts et al., 2012), social support (Koch & Mansfield, 2004), and the mind/body approach (combined with information provision, self-education, relaxation training, group support, lifestyle modification, and psychological coping skills) (O'Connell, 2005).

Exercise

There are clear evidence-based psychological and physiological benefits of exercise (Department of Health, 2011; Lee et al., 2012; Netz, Wu, Becker, & Tenenbaum, 2005), yet women over 50 years old are the least physically active group in a population where physical activity levels are already low (based on figures from England:Stamatakis, Ekelund, & Wareham, 2007). Regular exercise can encourage a more positive body image (Ginis & Bassett, 2011; Hausenblas & Fallon, 2006) and feelings of physical mastery, which in turn increase self-esteem and wellbeing (Choi, 2000; Fox, 1997). Specifically, exercise helps to relieve physical and psychological symptoms associated with the menopause and decrease the risk of menopause-related illness, such as osteoporosis (Bonaiuti et al., 2002; Hingorjo, Syed, & Qureshi, 2008). This, in turn, improves self-esteem and satisfaction with life (Elavsky & McAuley, 2005; Sternfeld & Dugan, 2011). However, the decline in physical activity (from already low levels) for women experiencing the perimenopause leads to food intake being stored as excess visceral fat. This increases body weight, adipose tissue oestrogen production, reported vasomotor symptoms (Thurston et al., 2009) and breast cancer risk (Cuzick et al., 2011; Mayor, 2012). Lean menopausal women who have moderate gain in visceral fat during the menopause may have a more protective effect against the symptoms

and risks associated with higher adipose tissue oestrogen production (Singh et al., 2001). However, there is a high prevalence of obesity in peri and postmenopausal women, with 44% of postmenopausal women classed as overweight, among whom 23% are classed as obese (Lambrinoudaki et al., 2010).

Exercise can be used as a mechanism to reduce the amount of food intake being stored as visceral fat and potentially reduce menopausal symptoms (Daley et al., 2009; 2011). However, despite the benefits, menopausal women are one of the least active groups (Stamatakis et al., 2007). The most salient barriers to exercise participation in adults are old age, low physical health, feelings of illness and concerns of self-presentation (Goffman, 1959; Jones, 1964; Leary, 1995) because of bodily changes and lowered physical abilities (Hall, 2007; Seefeldt, Malina, & Clark, 2002). The menopause and its associated symptoms may also create barriers to exercise for women. For example, vasomotor symptoms can cause sleep disturbance (de Araújo Moraes et al., 2012; Landis & Moe, 2004) and increase symptoms of depression (Llaneza et al., 2012), reducing feelings of energy and motivation to be active. This, in turn, creates a vicious cycle between exercise behaviour and menopausal symptoms. Further understanding of the perceived barriers to exercise in women experiencing the menopausal transition would help to inform the promotion and support of exercise participation (Seefeldt et al., 2002), and address the complexities of this vicious cycle and its influence on wellbeing.

Wellbeing

It is important to acknowledge that illness and healthiness are separate factors (Cassidy, 2000), and therefore this doctoral work was not just about a woman's future avoidance of the suffering of symptoms and risk of future chronic medical conditions; but also about the

promotion of health, psychological well-being and empowerment (Defey, Storch, Cardozo, Diaz, & Fernandez, 1996; Prilleltensky, 2005; Weismiller, 2009).

Eudaimonic wellbeing focuses on the quality of lived experiences that is intrinsically worthwhile to human beings (Ryan, Huta, & Deci, 2008; Waterman, 1993). Within this thesis we examine three common forms of eudaimonic wellbeing: life satisfaction, self-esteem and subjective vitality. Menopausal symptoms can have deleterious effects on body image and wellbeing (Deeks & McGabe, 2001; Pearce, Thøgersen-Ntoumani, & Duda, under review-a) but menopausal women who exercise regularly have greater levels of wellbeing, specifically life satisfaction and self-esteem (Darling, Coccia, & Senatore, 2012; Elavsky & McAuley, 2005, 2007a, 2007b). Therefore, in our model in chapter 5, satisfaction with life and levels of self-esteem represented the wellbeing outcomes in our structural equation model. However, subjective vitality was examined in a different role to life satisfaction and self-esteem in relation to menopausal symptoms, exercise and body image.

The findings from the qualitative research in chapter 4 (Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2013) corroborated the hypothesis from previous research discussions (Deeks & McCabe, 2001) that menopausal symptoms, such as night sweats and sleep disturbance, can reduce perceived energy levels, which in turn impact a woman's daily life and function. This can include decisions about whether or not to exercise, feelings about the body and overall wellbeing. We therefore examine subjective vitality as a mediator between menopausal symptoms, and both exercise behaviour and body image, followed by life satisfaction and self-esteem as final wellbeing outcomes.

Researchers have begun to explore the individual complexities of body image, symptom perception, health, spiritual and psychological wellbeing by giving voice to those experiencing the transition (Balabanovic et al., 2012; King & Hunter, 2002; Marnocha et al.,

2011; Steffen & Soto, 2011; Stephens, 2001). However, further exploratory work was needed to understand the relationships between body image, menopause, exercise and eudaimonic wellbeing, and provided a rationale for the work included in this thesis.

An introductory summary of the thesis

Epistomologically, my approach to research is based on the ideas of critical realism (Bhaskar, 1975). I aim to find pragmatic solutions that can be applied to real world problems acknowledging the social, political, and economic contexts in which they emerge (Madill, 2007). This stance argues that our experiences are mediated by our perceptions and beliefs, and it is important to understand an individual's experience as something that is both similar and different from others (Barnett-Page & Thomas, 2009). Quantitative and qualitative data collection and analyses are increasingly combined in psychology to complement each other and examine both the outcome and processes associated with a research problem (Plano Clark & Creswell, 2008; Thøgersen-Ntoumani, Fox, & Ntoumanis, 2005). As the aim of this doctoral work was to carry out exploratory research in order to inform future practice and research, including tailored interventions, a mixed methods approach using a combination of quantitative and qualitative methods was used. This approach enabled a range of question types to be explored in order to create a larger, more dynamic picture.

As discussed at the beginning of the introduction, the body and a woman's perception of their body play an important role throughout their lives. This is especially the case through important life transitions that can change a woman's appearance, self-image and feelings towards herself and her body. The changes that an individual faces, their ability to cope with these changes and how these changes fit into their lifestyle are important factors that influence health and quality of life.

Due to the relatively early stages of psychological research regarding the menopause, body image and health, I aimed to carry out exploratory work to inform future practice and research in order to aid those experiencing the menopausal transition in the future. When initially assessing the literature regarding the variables of interest in this PhD thesis work, I found reviews regarding exercise and body image (Campbell & Hausenblas, 2009; Hausenblas, Brewer & Raalte, 2004; Hausenblas & Fallon, 2006; Leary, 1992), exercise and menopause (Daley, et al., 2009; 2011), body image and wellbeing (Cash, 2004) and exercise and wellbeing (Berger & Motl, 2000; Netz, et al., 2005; Paluska & Schwenk, 2000; Penedo & Dahn, 2005). However, there was no review examining the literature between body image and menopause.

Firstly, the literature was systematically scoped in order to examine the existing evidence around the menopausal transition and body image. The studies found were largely heterogeneous with regards to the methods used, aspects of menopause and body image measured, and relationships and experiences discussed. This highlighted the need to investigate these mixed experiences to examine how best to help support menopausal women in the future. This systematic scoping review is presented in chapter two, and includes a more in-depth discussion of body image literature in association with the menopausal transition.

The next stage of the research, was to begin carrying out exploratory empirical work, however, an initial ethical concern was the recruitment of participants because of the associated stigma and personal nature of the menopause (Chrisler, 2011), I was cautious that women may be less forthcoming as participants. Women who seek medical aid for the menopausal transition through healthcare, such as the National Health Service in the United Kingdom, was a recruitment option. However, as not all women seek medical aid, this would have resulted in a sampling bias. This avenue of recruitment would have only focused on the

group of menopausal women who sought help from healthcare, leaving a dearth of research investigating those who have not visited the doctor about their menopause. Reasons for not seeking medical advice may be because of a lack of understanding about the transition, cultural or social differences (Rice, 2005), or more positive experiences, such as a lack of troubling symptoms or having the ability to cope with the transition (Stotland, 2004, 2005). All of these reasons and experiences are just as important to understand women's support needs, and to learn from those who have had positive experiences.

The next action plan was to recruit women experiencing the menopause from generic social groups. However, it soon became clear that there is a lack of social support networks at the organisational level (Cassidy, 1997) for women of menopausal age in the UK. When searching, I found groups aimed at providing social support and leisure activities for teenagers, youth, pregnant women, young mothers and older women, with a paucity of provision and support for middle-aged women. At this stage, it was appropriate to get advice from the experts of their experiences, and I arranged a pilot focus group interview with five women I had identified from convenience and snowball searches who were experiencing the menopausal transition. The aim of this interview was to discuss a draft interview schedule and questionnaire, as well as advertising and recruitment strategies. The most useful discussions were those that gave insight to how women experiencing the menopausal transition might think or feel about this research. They suggested that often menopausal women are engaged in time-consuming and stressful activities (for example, looking after pubescent children, vulnerable parents and working in full-time employment), and so menopausal women are more likely to participate if the research takes up as little of their time as possible and they are treated as experts of their own experiences.

All of the women in the focus group said that they would be less likely to respond to public advertisements because of the personal nature and associated stigma of the menopause. Posters in private spaces with easy pull off tags were suggested to be the best option, such as women's changing rooms or toilet cubicles (examples in appendix 1). There was also the very prominent issue that menopausal women may be reluctant to open up to me during the interviews, a premenopausal 27 year old female. This reluctance was then experienced first-hand during my first attempts to recruit women experiencing the menopause for my doctoral work. In an attempt to find a solution to this problem, I developed a synchronous online interview method to provide an extra veil of anonymity for the participant, which is presented in chapter three.

One of the highlighted gaps in the research from the systematic scoping review was the need to understand the lived experiences of women experiencing the menopausal transition. This was not just important to examine in those experiencing the gradual and natural process, but also in those experiencing a more sudden change as a result of surgery. There is a lack of phenomenological research exploring this sudden and drastic change in a woman's life, which is usually as a result of a gynaecological illness, with specific reference to the woman's relationship with her body image and how she coped with changes to her body.

Gathering in-depth accounts of women's experiences of a surgically-induced menopause provided a rich understanding of both positive and negative experiences and how these can be used to inform women in the future experiencing similar changes and practitioners supporting them. In chapter four a study is presented using an Interpretative Phenomenological Analysis (IPA) approach (Smith, 1996; Smith, Flowers, & Larkin, 2009)

to examine the lived experiences of women who have experienced the menopause as a result of a hysterectomy with Bilateral-Salpingo Oopherectomy.

Chapter five, the last empirical chapter of this thesis, contains the combination of the breadth of results from a nationwide survey, with the depth of qualitative interviews in women who experienced a natural menopausal transition. In this chapter the complex nature of the relationships between menopausal symptoms, body image, exercise behaviour, and eudaimonic well-being are investigated. The findings from this mixed methods study are rooted in a theoretical model developed as a result of this doctoral work.

CHAPTER 2

Body Image during the Menopausal Transition:

A Systematic Scoping Review

Gemma Pearce, Cecilie Thøgersen-Ntoumani, and Joan L. Duda

A version of this manuscript has been accepted for publication in *Health Psychology Review*

Abstract

This scoping review aimed to examine women's body image during the menopausal transition systematically. A systematic search strategy and exclusion criteria were applied to ensure only relevant research was included in the review. Fifteen studies were included. The direction of the relationship between body image and menopause was equivocal. The menopause is complex and should not be examined as a simple positive or negative transition. There is a sense of confusion for women experiencing the menopausal transition due to contradicting medical advice and societal expectations of body image. Currently, the research consists of exploratory-based studies that highlight the importance of researching this field further to aid adaptive coping and self-management across this transition.

Keywords: Menopause; climacteric; body image; systematic review; appearance

Introduction

Body image is a multifaceted construct involving perceptual, cognitive and affective components relating to the body's appearance, functions and capabilities (Cash & Pruzinsky, 2002). Research investigating body image has tended to focus on puberty and young adult populations. There is a dearth of knowledge regarding other life transitions, especially the challenges associated with bodily change and ageing in middle-aged women (Tiggemann, 2004). However, interest in body image over the lifespan (Johnston, Reilly, & Kremer, 2004; Mellor, Fuller-Tyszkiewicz, McCabe, & Ricciardelli, 2010) and comparing younger and older women (McKinley, 2006; Pruis & Janowsky, 2010) has increased over the last 10 years. This has led to further questions regarding body image at mid-life, with researchers acknowledging the need to address the important yet complex changes associated with the menopause. As body image has a significant impact on self-esteem and self-confidence, understanding a woman's bodily perceptions is an important step to aid health care professionals when implementing support over this transition (Price, 2010).

Additional to the inevitable cessation of menstruation and ovary function, menopausal symptoms and bodily changes can have negative consequences for health and quality of life, such as increased risk of osteoporosis and lower subjective hedonic well-being (Elavsky & McAuley, 2005). Vasomotor symptoms (i.e., hot flushes and night sweats) are the most common menopausal symptoms (~70%) reported by women in Europe and North America (Hunter, 1993). In addition, many women experience other somatic, sexual, menstrual and psychological symptoms that have been attributed to the menopause (Hunter, 1992).

Definitions of menopause and the menopausal transition

This section clarifies the terminology used in menopause-based research and defines the meaning of the menopausal transition in this review. The WHO scientific group (1996) offered a series of definitions of the menopause, which were used as the framework in this review. The menopause can occur naturally or be induced as a result of medical treatment (e.g., chemotherapy) or surgery (e.g., undergoing a BSO to remove both ovaries[2]). A woman is said to be postmenopausal following such events.

The natural menopause is defined as the permanent cessation of menstruation, which occurs as a result of the loss of ovarian follicular activity and is recognised after 12 months of consecutive amenorrhea, for which there is no other obvious cause. Prior to this stage is the perimenopausal phase, which begins when the endocrinological, biological and clinical features associated with an approaching menopause commence and continues until 12 months following the final menstruation. The reproductive period before the perimenopause is referred to as premenopause.

Additionally, the climacteric is a term used synonymously with the former menopausal terms. The IMS (IMS, 1999) defines the climacteric as the ageing transition in women from the reproductive phase to the non-reproductive phase. This includes a variable time period during and after the perimenopause, which can be associated with symptomatology. The definition of the whole menopausal transition usually consists of amalgamations of the above terms and applies to both the WHO's (1996) definitions of the menopause and other symptomatic menopausal stages, and the IMS's (1999) definition of the

[2] A hysterectomy without BSO does not result in a surgical menopause.

climacteric. Therefore, ‘menopausal transition’ will be the term used for the remainder of this paper to encompass all of the above meanings.

Body image and the menopause

Similarly to puberty and pregnancy, the menopausal transition is a milestone in a woman’s life, with accompanying bodily changes and symptoms that can have a profound effect on her body image. The bodily changes in appearance and function that some women face, such as weight and shape change, heavy unpredictable bleeding, sleep disruption through night sweats, and bodily markers of ageing, such as changes in skin, hair and sexual function (WHO, 1996), can change the way a woman thinks and feels about her body (Chrisler & Ghiz, 1993). Yet at the same time, a woman’s attitudes towards the menopause (Ayers, Forshaw, & Hunter, 2010) and her culture (Freeman & Sherif, 2007) can change her experience of the transition.

Cultures with a societal emphasis on the presentation of the self and positive discrimination towards attractiveness may exacerbate body image concerns for those menopausal women who feel they are moving away from those expectations, reducing their quality of life. A review paper examining the management of menopause, depression and anxiety examined the profound yet complex impact menopause can have on women’s body image (Deeks, 2003). Deeks found that the changes to the body during the menopause were associated with concerns about ageing, such as concerns of wrinkles and body weight/shape change, and in turn reduced the women’s body image and mood. Deeks discussed the complex nature of directionality in the research. For example, women rated themselves as lower in fitness and appearance during and after the menopause compared to premenopause. However, in turn, women who were dissatisfied with their appearance were more likely to

experience more menopausal symptoms. The question remains as to whether menopause changes body image, vice versa, or if the relationship is reciprocal.

Recently, Slevec and Tiggemann (2011) reviewed literature investigating disordered eating in middle-aged women. This review introduced the distinct rationale for investigating body image over the menopausal transition as women 'move away from the cultural beauty ideals of thinness and youth' (p516). This review focused on body image across menopausal stage and age, and found three papers with equivocal findings. One cross-sectional study found that postmenopausal women had less positive attitudes towards their appearance than premenopausal women (Deeks & McCabe, 2001). Yet, another cross-sectional study (Koch, Mansfield, Thurau, & Carey, 2005) and a prospective longitudinal study (McLaren, Hardy, & Kuh, 2003) found attractiveness perceptions and body dissatisfaction did not vary by menopausal stage or age. However, these reviews did not consider the broader literature investigating other aspects of body image using a wider range of methods measuring changes across the menopausal transition.

Concerns of body image and menopause have featured in conceptual and review papers, particularly over the previous two decades, inspiring empirical research in this area. Yet there has been no systematic scoping review specifically summarising the existing literature on this topic. This paper aims to systematically review literature that has examined women's body image during the menopausal transition over the past 20 years. As this research area is still in its relative infancy, it was important to carry out an exploratory scoping review (Arksey & O'Malley, 2005) with a 'knowledge support' approach (Mays, Pope, & Popay, 2005). This approach aims to aggregate the evidence base that already exists, assess its quality and highlight the gaps that require further study (Estabrooks, Field, & Morse, 1994). In order to capture all of the emerging evidence, a mixed methods systematic

scoping review was carried out (Arksey & O'Malley, 2005). A preliminary scoping of the literature on body image and menopause found that the body of literature only consists of 'views' studies (Harden & Thomas, 2005). This includes the research (qualitative and quantitative) that focuses on people's perceptions, beliefs and attitudes, which relates largely to the perceptual aspect of body image. There is a paucity of randomised control trials or other phase III intervention studies and so it was inappropriate to carry out a meta-analytical review at this stage (Levac, Colquhoun, & O'Brien, 2010). The objectives of the present review were to examine the extent, range and nature of the research in the field and summarise the research findings to inform future policy, practice and research. The University of York's systematic scoping review framework (Arksey & O'Malley, 2005) was used as its iterative nature was appropriate to this review's aims (Alam, Speed, & Beaver, 2011). In light of the background literature addressed in this introduction and the preliminary scoping exercise, the following review questions were posed:

1. What type of research exists on the perceptions of women's body image during the menopausal transition over the past 20 years?

2. What aspects of body image and menopause are measured, and in what context?

3. What is the direction of the relationship between body image and menopause (does body image predict menopausal experience, or does the menopausal transition change a woman's body image)?

4. What are women's experiences of the menopausal transition in relation to body image?

Method

The benefits and challenges of mixed method systematic scoping reviews follow a similar logic to those of primary mixed methods research, for example by providing a greater understanding of a phenomenon (Mays et al., 2005). Often the rationale for using multiple methods in a systematic scoping review is triangulation, where the aim is to confirm or refute previous findings or to support a line of argument (Harden & Thomas, 2005). However, that was not the case in this review. Instead, the reason for drawing on both types of literature was to investigate the complementary bigger picture of how the findings as a whole can be amalgamated to guide researchers and practitioners in the future (Hagger, 2009; 2010).

Mixed method systematic reviews in medicine and health, for example Thomas et al. (2004), often use a segregated design to meta-analyse controlled trials, thematically analyse interview studies and then narratively synthesise the two together to examine what works (or does not work) and why. However, as the research included in this review were 'views' studies of a heterogeneous nature, it was not appropriate to segregate the analysis of the qualitative and quantitative papers in this manner (Harden & Thomas, 2005)[3]. An integrated design (Sandelowski, Voils, & Barroso, 2006), more commonly used in education research, of descriptive mapping and narrative synthesis was used to analyse the research (Templin & Pearce, 2012). This review included a mix of papers with a range of research questions, data collection methods and analysis (numerical and textual). The findings arising from this review are represented as a description of the content, a quality assessment of the studies, and a summary of the arising themes within this review. The review searched literature from the last 20 years that had been written in English until October 2012.

[3] It is argued in mixed methods research synthesis that neat labels of 'qualitative' and 'quantitative' studies simplify research in to black and white categories, , when often this divide is not the case in 'real world' research (Harden & Thomas, 2005; Sandelowski, Voils, Leeman, & Crandell, 2011).

Searching and identification

Search key words were combinations based around the two main variables in the review questions: Menopause (climacteric; perimenopause; menopausal symptoms; early postmenopause; MeSH term - Menopause) and body image (appearance evaluation/anxiety/orientation/control/ contingent self-worth; body confidence/satisfaction/appearance/functioning/attitudes/esteem/investment/importance; self-presentation/perception/objectification; perceived attractiveness; physique anxiety; weight concern; MeSH term – Body Image). Limits were applied for only human participants, English language articles from 1992 to present date (October 2012), and excluded letter, commentary and editorial format types.

These keywords were used to conduct searches of peer-reviewed research and grey literature using a wide range of electronic bibliographies (Scopus, MEDLINE, PsychINFO, Google Scholar), a forward citation search using ISI Web of Knowledge, and manual searches through the included studies bibliographies and online specialist journals (Climacteric, Menopause, Maturitas, Menopause International – formerly known as The Journal of the British Menopause Society, The Journal of North American Menopause, Obstetrics and Gynecology, Body Image). The author also invited researchers in the field to submit their work for screening in the review. The searching and screening stages were completed using Thompson Reuters' EndNote X5 (see appendix 2 for search strategy in electronic databases).

Screening and exclusion criteria

The search strategy produced a selection of titles and abstracts, which were screened using the exclusion criteria described below. All duplicate articles were removed. The exclusion

criteria were formed based on the review question and objectives, and applied successively to each article.

Exclusion criteria.

EXCLUDE 1. Not human participants.

EXCLUDE 2. Not written in English.

EXCLUDE 3. Published before and including 1st January 1992, or written after October 2012.

EXCLUDE 4. The study is not empirical - needs to be evidence based. Not conceptual, review or philosophical only.

EXCLUDE 5. The focus is not explicitly about the female menopause (exclude studies that do not state that the women are experiencing the menopausal transition).

EXCLUDE 6. The focus is not explicitly about body image (exclude studies that do not include body image. Exclude studies that only investigate objective measures of the body, such as weight or size, without examining the woman's perception of their body).

EXCLUDE 7: The participants are not women experiencing the menopausal transition (exclude studies with only women who are premenopausal, and those who are postmenopausal and no longer experiencing menopausal symptoms).

EXCLUDE 8: The paper does not have outcomes relating to the menopause and body image, and their relationship (numerical or textual).

All papers that were not excluded remained in the review and full text versions were obtained for the reapplication of the exclusion criteria. If the abstract contained insufficient information to determine whether it should be included in the review, then a full text version of the paper was retrieved in order to make a further informed judgement. This process ensured that only relevant articles were included in the analysis stage of the review. Where the same piece of research was written up as multiple publications, this was grouped and analysed as one.

Analysis

Three stages of analysis were included in this review: descriptive mapping, quality assessment and narrative synthesis.

Descriptive mapping. This analysis summarises descriptive information about the studies. Information from each paper was extracted and coded in Microsoft Office Excel 2007 to provide descriptive statistics on contextual and methodological information. The aim of this was to answer the first three questions in the review.

Quality Assessment. All included studies were assessed for quality and relevance based on the EPPI Centre's Weight of Evidence (WoE) framework (Gough, 2007) used in the fields of health and education for mixed methods systematic reviews. Scoping reviews do not typically assess quality of included studies as the main aim is to examine the extent and nature of the research in the field (Levac et al., 2010). Therefore, this assessment did not determine study eligibility, but the outcome of this assessment aided the depth of the narrative synthesis (for another example of this, see Alam et al., 2011). It highlighted those studies of lower quality or relevance where caution should be taken when interpreting the results and those of higher quality or relevance where greater weighting of the results should

be applied in the narrative synthesis. The assessment of quality examined whether the studies provided explicit detail of their methods and demonstrated sound internal methodological coherence relative to the methods used (e.g., interview paper using grounded theory reached saturation, or controlled trials were randomised with a comparison group and a follow up). These assessments were also based on whether the research design and analysis were deemed appropriate for answering the study's research question (e.g., a question to investigate significant relationships or differences should collect numerical data and analyse it quantitatively, whereas a study examining the lived experiences of menopausal women would collect textual data and examine it qualitatively). Lastly, the relevance of the study topic to the review was assessed (e.g., if the study only measured body image as a secondary outcome and did not discuss it in great depth, this was given less weight compared to a study for which the main aim was aligned with the focus of the present review). This section aimed to inform the narrative synthesis.

Narrative synthesis. An in-depth synthesis identifying arising themes was completed. A narrative approach was used to identify patterns of results and examine potential anomalous findings. This section aimed to examine the fourth question in the review.

Results

The searches retrieved 2,786 hits with 260 duplicates removed. After the initial title and abstract screening, 80 papers remained. The screening process is diagrammatically represented in a PRISMA flow diagram in Figure 2.1 (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009).

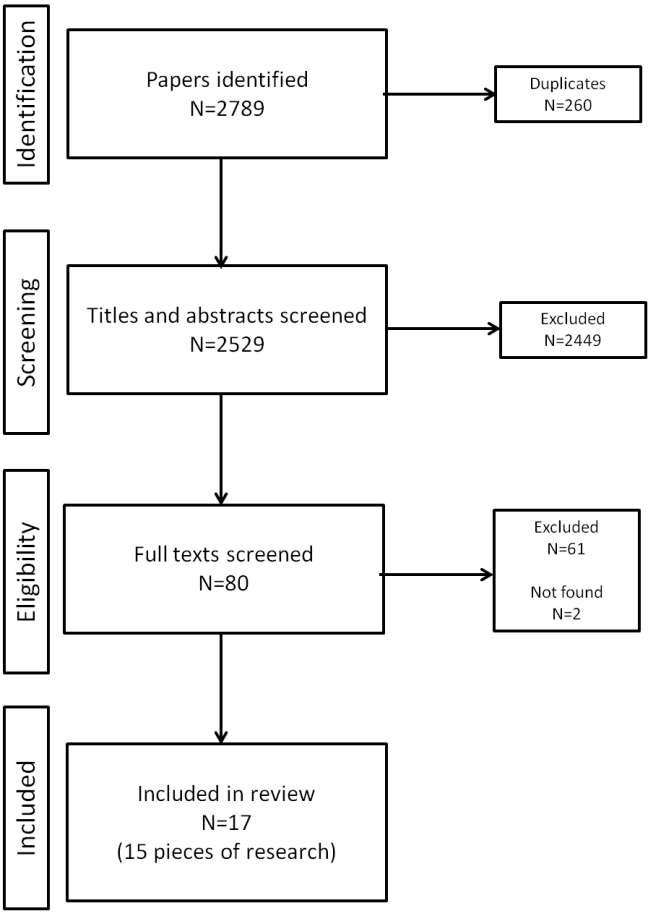

Figure 2.1: PRISMA flow diagram

Full texts were acquired and exclusion criteria reapplied. Two full texts could not be found and so for the purpose of explicitness were marked as potentially relevant to this review (Calandra, 2001; Donaldson, 1995). Fifteen pieces of research (17 papers) remained and were included in the review analysis. The two pieces of research with two publications were: (Ballard, Elston, & Gabe, 2005; 2009) and (Banister, 1999; 2000). In the remainder of this paper, these pieces of research will be referred to using the most recent publication. The studies have been visually mapped over time and method in Figure 2.2.

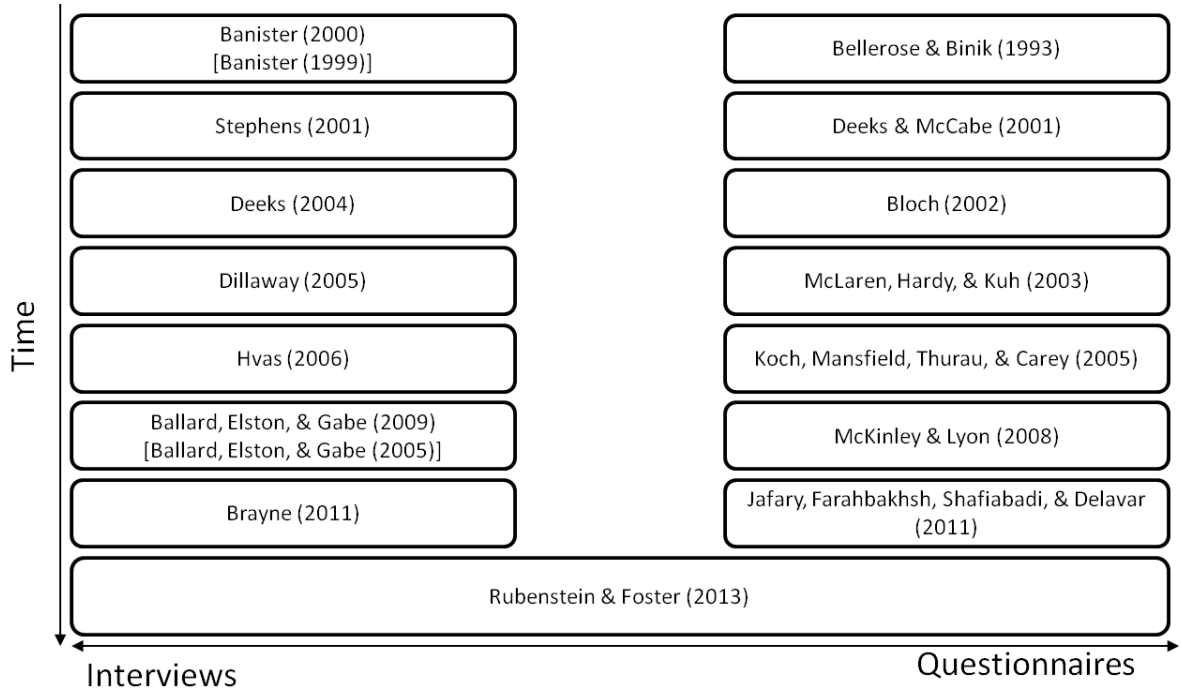

Figure 2.2: Visual map showing studies over time and method.

Descriptive mapping

1. What research exists on the perceptions of women's body image during the menopausal transition over the past 20 years?

2. What aspects of body image and menopause are measured, and in what context?

The majority of the papers had been published in a range of peer-reviewed journals focusing on sociology, menopause, body image, women's health and the medical profession. Only one piece of research was published in a book that focused on the outcomes of primary empirical interview data. Descriptive information of the included studies is presented in Table 2.1.

Table 2.1: Included studies in the review in chronological order.

Title	Author(s)	Year	Source	Country	Design	Sample
Body image and sexuality in oopherectimized women.	Bellerose & Binik	1993	Archives of Sexual Behaviour	Canada	First stage was structured closed interview/questionnaire. Second stage was a photoplethysmograph measuring vaginal blood flow and subjective arousal.	Stage 1: 129 Stage 2: 58.
Women's midlife confusion: "Why am I feeling this way?" [Women's midlife experience of their changing bodies.]	Banister	2000 [1999]	Issues in Mental Health Nursing [Qualitative Health Research]	USA	Ethnographic study, two individual interview each plus focus group interviews. Doctoral research.	11
Menopausal stage and age and perceptions of body image.	Deeks & McCabe	2001	Psychology and Health	Australia	Structured questionnaire	304
Women's experience at the time of menopause: Accounting for biological, cultural and psychological embodiment.	Stephens	2001	Journal of Health Psychology	New Zealand	Focus group discussions (n=48) and individual interviews (n=32).	80
Self-awareness during the menopause.	Bloch	2002	Maturitas	Austria	Numerical for difference and association tests.	51
Women's body satisfaction at midlife and lifetime body size: A prospective study.	McLaren, Hardy, & Kuh	2003	Health Psychology	UK	Repeated measures prospective study across the women's lifespan.	933
Is this menopause? Women in midlife-psychosocial issues.	Deeks	2004	Australian family physician	Australia	Case studies	2
(Un)changing menopausal bodies: How women think and act in the face of a reproductive transition and gendered beauty ideals.	Dillaway	2005	Sex Roles	USA	Focus group interviews (n=8) and then individual interviews (n=53).	61

"Feeling frumpy": The relationships between body image and sexual response changes in midlife women.	Koch, Mansfield, Thurau, & Carey	2005	The Journal of Sex Research	USA	Questionnaire with closed and open questions.	307
Menopausal women's positive experience of growing older.	Hvas	2006	Maturitas	Denmark	Individual interviews	24
Menopausal attitudes, objectified body consciousness, ageing anxiety, and body esteem: European American women's body experiences in midlife.	McKinley & Lyon	2008	Body Image	USA	Numerical questionnaire	74
Private and public ageing in the UK: The transition through the menopause. [Beyond the mask: women's experiences of public and private ageing during midlife and their use of age-resisting activities.]	Ballard, Elston, & Gabe	2009 [2005]	Current Sociology [Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine]	UK	Individual interviews	32
Quality of life and menopause: developing a theoretical model based on meaning in life, self-efficacy beliefs and body image.	Jafary, Farahbakhsh, Shafiabadi, & Delavar	2011	Ageing and Mental Health	Iran	Numerical questionnaire	349
Sex, meaning and the menopause: a book for men and women.	Brayne	2011	Book: London, Continuum International Publishing Group	UK	Range of interview methods for book	more than 70
'I don't know whether it is to do with age or to do with hormones and whether it is do with a stage in your life': making sense of menopause and the body.	Rubenstein & Foster	2013	Journal of Health Psychology.	UK	Mixed methods, first stage was online questionnaire and second stage was interviews	Stage 1: 270 Stage 2: 12

One study used a mixture of both questionnaire and interview methods (Rubenstein & Foster, 2013), and of the remaining, half (7) used questionnaires for data collection and the other half (7) were based on interview methods (one of which were case studies; Deeks, 2004). The majority of the questionnaire studies used closed questions with numerical data. However, one of the questionnaire studies used both open and closed questions, and used the textual data from the open questions to complement the numerical findings from the closed questions. There were two quantitative studies that used objective methods in combination with self-report measures. Bellerose and Binik (1993) measured sexual arousal through vaginal blood flow using a photoplethysmograph alongside subjective measures of mood, body image (body satisfaction, body comfort and perceived body change) and sexual functioning. McLaren et al.'s (2003) paper was the only prospective longitudinal study included in this review and had repeated objective measures of BMI over time alongside a questionnaire assessing participants' body image (body satisfaction and weight esteem) from the age of 7 until 54. On a smaller scale, Banister (2000) carried out a qualitative study over time with two to three interviews per individual held two weeks apart.

There was only one study included in this review from the 1990s (Bellerose & Binik, 1993), with 12 studies published between 2000 and 2011 (one book and 11 peer-reviewed journals), and the remaining unpublished study finished in 2011. All together this review includes an estimated 2697 participants[4] ranging from 2-933 participants in each study. The two main countries with research written in English on this topic were the UK (4) and USA (4), with two in Australia, one study in Austria, Denmark, Canada, New Zealand and Iran. Five of the

4 n≈2695, which includes a definite 2625 participants from articles plus 'at least 70' from Brayne's book (2011). The exact number could not be confirmed when the review team contacted the author.

papers identified their samples as predominantly white, with the remaining papers not specifying ethnicity. The five articles that identified the sexual orientation of the participants reported that the sample in their research was predominantly heterosexual (Banister, 2000; Brayne, 2011; Dillaway, 2005; Koch et al., 2005; McKinley & Lyon, 2008).

All the studies reported the women's ages, which ranged from 30-68 years old. Overall, ten studies specified the menopausal status of the participants they were investigating, with definitions congruent with the WHO definition (1996). This included all quantitative papers, one mixed methods study (Rubenstein & Foster, 2013) and two qualitative studies (Ballard et al., 2009; Deeks, 2004). Five of these studies included premenopausal women and seven included postmenopausal women to compare body image across menopausal stage, with the remainder stating they were investigating perimenopause and/or menopause. The study by McKinley and Lyon (2008) only included postmenopausal women in their final analysis as they did not recruit enough participants to analyse the other menopausal stages using inferential statistics. This study did not measure menopausal symptoms or length of time post menopause (only menopausal attitudes). The group of women investigated may therefore have consisted of a heterogeneous group of women, ranging from those experiencing symptoms not long after a 12 month cessation of their menstruation to those no longer experiencing symptoms years after their menopause. The remainder of the studies in the review were based on self-reported menopausal status and specified that participants should only take part in the research if they felt they were menopausal or experiencing symptoms associated with the menopause. However, it was not clear if a definition was provided to participants for guidance when judging their suitability for the study.

Five studies clarified whether their participants had undergone a surgical, medical or natural menopause. The longitudinal prospective study by McLaren et al. (2003) measured each woman's menstruation status at eight time points and included detail of menopausal stage. Bellerose and Binik (1993) specifically investigated surgical and natural menopause differences. Jafary, Farahbakhsh, Shafiabadi, and Delavar (2011) stated that they excluded surgically and medically-induced menopause. Bloch (2002) excluded those that had undergone a surgical menopause through a BSO, but included participants who had just undergone a hysterectomy. Deeks (2004) gives details of the natural menopausal stage of the two women in the case studies. Two pieces of research stated that they included those who had experienced a hysterectomy (Ballard et al., 2009; Brayne, 2011) but did not explicitly state if they were naturally menopausal before or after the operation, or surgically menopausal as a result of a hysterectomy with BSO.

The studies that included qualitative analyses reported the following body image constructs specifically attributed to the menopause: age-related changes in body appearance; physiological changes in body functioning; changes in physical attractiveness; body-awareness – women's perceptions and experience of their own body and looks; embodiment and "body literature" (Stephens, 2001, p. 655).

The studies that included quantitative analyses examined body image by measuring BMI, diet, exercise behaviour, fitness, health, perceived attractiveness/appearance, perceived body shape/figure; overweight preoccupation, body areas satisfaction, body-esteem, appearance-related menopausal attitudes, objectified body consciousness/self-objectification, body surveillance, body shame, and appearance-related ageing anxiety.

3. What is the direction of the relationship between body image and menopause (does body image predict menopausal experience, or does the menopausal transition change a woman's body image)?

To examine the direction of the relationship between body image and menopause, the studies using a hypothetico-deductive approach, numerical data and quantitative analyses were the most appropriate sources of information. These studies (Bellerose & Binik, 1993; Bloch, 2002; Deeks & McCabe, 2001; Jafary et al., 2011; Koch et al., 2005; McKinley & Lyon, 2008; McLaren et al., 2003; Rubenstein & Foster, 2013) have proposed a hypothesis based on their scope of the literature, and tested a specified direction of the relationship between body image and menopause.

Some of these studies provided evidence that the menopausal transition, and its associated changes, can impact a woman's body image (for better, worse, or a combination of both). Two cross-sectional studies found that premenopausal women regarded themselves as more attractive than menopausal women (Deeks & McCabe, 2001; Koch et al., 2005). However, a prospective study spanning 48 years showed that postmenopausal women felt more satisfied with their appearance than their younger selves (McLaren et al., 2003). Bellerose and Binik (1993) found that those experiencing the natural menopause were more likely to feel satisfied and comfortable with their bodies and view their bodily change as positive, than those experiencing a surgical menopause. The women who had a BSO and no hormonal treatment afterwards reported the lowest levels of body satisfaction and comfort, and perceived their bodily change to be the most negative overall when compared to other groups.

Bloch (2002) concluded that it may not only be changes in oestrogen levels that affect symptoms in menopausal women, but also attitudes and slef-perception. Those women with higher appearance evaluation, self-esteem and positive attitudes towards the menopause experienced fewer symptoms associated with the menopause. In addition, women with negative attitudes towards the menopause experienced higher levels of self-objectification, body surveillance, body shame and body esteem (Rubenstein & Foster, 2013)[5]. Body shame also acted as a moderator, with lower levels of body shame strengthening the positive relationship between appearance-related menopausal attitudes and body esteem (McKinley & Lyon, 2008).

Menopausal women with perceptions of greater levels of fitness, body areas satisfaction, self-efficacy and health evaluation felt they had a higher meaning and quality of life, compared to those with low scores. Additionally, the menopausal women who rated themselves as more attractive compared to those who perceived themselves to have low levels of attractiveness, assessed their health status as 'better' and experienced a higher quality of life as an indirect result (Jafary et al., 2011).

Quality Assessment

In a quality assessment of the papers within this review, the highest weighted study was Rubenstein and Foster's (2013) mixed method paper. Their research question was highly relevant and design appropriate to answer our review question. They measured a sample of270 participants using a range of variables (menopausal attitudes, self-objectification, body surveillance and body shame), adopted a questionnaire and analysed the data using inferential

[5] A systematic review (Ayers et al., 2010) has also provided evidence that women with negative attitudes towards the menopause suffer more menopausal symptoms. However, this was not included in this review paper as it was not a primary empirical study and did not examine body image.

statistics investigating relationships and variance. This was followed by in-depth interviews complementing and delving into the findings based on the questionnaire data. For example, the quantitative data revealed a negative association between positive attitudes towards the menopause and body image concerns. The qualitative portion found that a negative attitude towards the menopausal transition and high levels of concern about body image may be due to women perceiving the relationship between menopause and ageing as synonymous, and the feeling of being invisible and less sexually attractive. Individually these two methods have merits, but together they can be combined to present a clearer picture by either answering a question in more depth or a broader range of questions.

The paper by Koch et al. (2005) reports a cross-section of a larger longitudinal cohort study with a mixture of numerical and textual data. It collects numerical and textual data through a questionnaire method, and analyses the closed questions using inferential statistics and the open questions using content analysis. Thus the answers to the open questions are presented as both numerical and textual to complement the findings from the closed questions. This method allowed the researchers to answer a wider range of questions and provide a deeper contextual element to their findings.

The papers that only used numerical data and quantitative analyses included in the review were of moderate to high methodological rigour[6]. Validity and reliability were usually both reported in the method section and reflected upon in the discussion. The highest rated paper was the McLaren et al. (2003) prospective 48 year-long study combining objective measures of BMI

[6]This judgement was made relative to the questionnaire-based studies being examined. Other studies, such as high quality randomised control trials, would be judged with higher methodological rigour but none have been carried out on menopause and body image and therefore not in this review.

with subjective measures of body satisfaction over the lifespan and menses-oriented life transitions. The paper by Jafary et al. (2011) was detailed and explicit with the design well matched to their study questions. The study focus was assessed as highly relevant to this review. It examined body image (body areas satisfaction, health evaluation, fitness evaluation and appearance evaluation) and its predicted impact on quality of life within a sample of menopausal women.

Overall, the numerical/quantitative research included more explicit detail regarding sample, method and definitions of key terms being investigated than the textual/qualitative research. As the book by Brayne (2011) was not a peer-reviewed journal article, it was assessed as the lowest weight of evidence. The research was not explicit or sufficiently detailed to be replicated (e.g., number of participants was unknown, and data collection and analysis was not systematic) and therefore findings were more likely to be biased. However, all of the textual/qualitative studies included in the review were of high relevance and provided valuable information, especially in regard to understanding mechanisms. They examined the meaning and complexities that explain patterns and anomalies. While quantitative investigation can be rigorous, it is less suitable when carrying out exploratory investigations into a complex topic where researchers have minimal information to form hypotheses for interventions.

Narrative synthesis

4. What are women's experiences of the menopausal transition in relation to body image?

There were two main outcome themes identified from the 15 studies in this review. The first related to the finding that women often simultaneously interpret their experiences as both

positive and negative. The second theme related to the confusion regarding the changing body and the menopause, which often arose as a result of contradicting information supplied by peers and health care professionals. The mixed messages between information supplied by professionals and expectations placed on them by society created a feeling of role ambivalence (e.g., no longer being a potential child bearer and the loss of sexual and feminine stereotypes that accompany that).

The double-edged sword. As discussed in the introduction, the experience of body image across the menopausal transition has shown equivocal results in the quantitative research in previous reviews. By examining the broader literature in this review, it became clear that the relationship is complex. The experience of the menopause was simultaneously interpreted by the women as both positive and negative, and was viewed as heavily related to a woman's experience of bodily changes and how she managed them (Brayne, 2011; Deeks, 2004; Dillaway, 2005; Hvas, 2006; Rubenstein & Foster, 2013). For example, the cessation of menstruation was often interpreted as liberating because of the freedom from bodily functions associated with reproduction, and therefore, from the worry about the use of contraception or tampons (Hvas, 2006; Stephens, 2001). Yet, at the same time, the loss of child bearing ability was sometimes mourned (Ballard et al., 2009; Banister, 2000; Bloch, 2002; Rubenstein & Foster, 2013). To some women, the menopause was associated with a feeling of the loss of social function with regard to child bearing capability. This loss could be perceived negatively by women, who often felt concerned about reduced sex appeal and sex drive, and / or conversely perceived positively with women celebrating sexual liberation and freedom of bodily responsibility (Brayne, 2011; Deeks & McCabe, 2001; Koch et al., 2005; Rubenstein & Foster, 2013). This dualism of experience predominantly arose as a theme in the textual/qualitative research as it allowed

participants to reflect upon and explain a larger complexity of meaning to bodily changes during the menopausal transition.

Body image changes are important to consider at this time in a woman's life, as they can often be perceived as the negative changes that taints a generally positive transition for some women (Dillaway, 2005; Hvas, 2006). This is because the menopausal transition concerns changes to both visceral body function and external visible features, which can affect a woman's feeling of control over her body and her concerns regarding the presentation of herself to others (Ballard et al., 2009; Stephens, 2001). Menopausal symptoms were often viewed as inconveniences creating a sense of feeling less well (Rubenstein & Foster, 2013), which was an experiential dimension that affected a woman's wellbeing and sense of self-worth (Stephens, 2001). Stephen's (2001) highlighted that this loss of control and wellness relates to the philosopher Leder's (1990) concepts of dysfunction and 'dysappearance', when one's sense of the visceral body is only heightened when it is not functioning normally. These bodily changes and menopausal symptoms can act as a barrier to fitness and health by reducing feelings of vitality (Deeks & McCabe, 2001). It also affects feelings of attractiveness, body satisfaction, and the quality of sexual relations. A woman may feel less confident that she will achieve the "body criteria" expected of her by society, which in turn results in lowered self-efficacy "in a feminine role" (Jafary et al., 2011, p635). This combination of consequences can negatively impact a woman's quality of life (Deeks & McCabe, 2001; Jafary et al., 2011; Koch et al., 2005).

There is evidence to suggest that a woman's interpretation of her menopausal experiences relates to her attitude towards the menopause and body image. For example, a woman with a negative attitude might think that physical changes she perceives to be negative, like weight gain,

are likely to happen and are out of her control, and that in turn these changes make her less sexually desirable (McKinley & Lyon, 2008). A negative attitude towards the menopause is associated with higher body dissatisfaction, self-objectification, appearance-related ageing anxiety, and lower perceived attractiveness during the menopausal transition (Banister, 2000; Bloch, 2002; Koch et al., 2005; McKinley & Lyon, 2008; Rubenstein & Foster, 2013).

Self-presentation concerns regarding appearance were often higher in employed and heterosexual women (Brayne, 2011; Dillaway, 2005; Hvas, 2006; Stephens, 2001). They felt that men judged them on their appearance, and that other women engaged in social comparisons with regard to appearance (Rubenstein & Foster, 2013). Women reported feeling worried about job security and were irritated as they felt they were not valued as highly for their knowledge and experience as they ought to be. At the same time, they were concerned that the bodily changes, such as more aches and pain, and less 'strength' (p249)[7], were not letting them live up to their work demands (Hvas, 2006). This was found to be less of an issue in work environments where self-worth was judged on knowledge, achievement and experience, such as academia, rather than on appearance (Brayne, 2011).

Despite all of these changes and new experiences to understand and address, there were women who reported feeling positive, in control of their bodies and well (Bellerose & Binik, 1993; Hvas, 2006; Stephens, 2001). Even though premenopausal women had more positive perceptions of attractiveness than those going through the menopausal transition and body dissatisfaction remains stable throughout the lifespan (McLaren et al., 2003), menopausal women were more likely to accept and be happy with a slightly larger figure, with one third still

[7] It is not clear here what the participant who quoted this means by strength (e.g., physical, psychological, emotional or a mixture).

evaluating their bodies as sexually appealing (Deeks & McCabe, 2001). More importantly, women experience fewer menopausal symptoms when they have greater positive perceptions of attractiveness and appearance satisfaction (Bloch, 2002). Adjusting to the menopause and construing the transition as a natural life event was accompanied by a newfound confidence to embark on the next stage of life and the freedom to focus on women's own needs as opposed to those of their families (Brayne, 2011; Hvas, 2006; Rubenstein & Foster, 2013; Stephens, 2001). It is useful to learn about the nuances of the women's positive interpretations in body image during the menopausal transition. This information enables researchers, health practitioners and policy makers to gain further insight to help support women to cope, not only with their symptoms, but with the bodily changes and associated feelings that arise.

The menopause paradox. There were many contradictions and much confusion about the menopause, with many of the reviewed papers discussing the conflicting theory surrounding this transition and how best to cope with the bodily changes and symptoms (Ballard et al., 2009; Banister, 2000; Brayne, 2011; Dillaway, 2005; Hvas, 2006; Koch et al., 2005; Rubenstein & Foster, 2013; Stephens, 2001). The biomedical view portrays the menopause negatively as a disease that can be treated. Therefore medical professionals are viewed as searching for a cure to fix a woman's hormone deficient body, for example through Hormone Replacement Therapy (HRT). Feminist literature argues that the menopausal transition does not have to be negative, and questions the social connotations of menopause and the perception of menopausal women as deviants from the socially accepted young sexual objects. This deviant, deficient and ageing view of the menopausal body has potential implications for how a woman perceives the menopausal transition and its impact on her body image.

The theory surrounding the menopause has constantly evolved over the last century causing the knowledge and understanding of the menopause to change with each generation (see chapter 1 for an introduction to menopause and theory). This evolution of scientific investigation and argument is beneficial, however, there is a gap between theory and practice, where the women experiencing the transition do not often receive the whole picture, and instead receive a mixture of modern and out-of-date information and expectations about their bodies from health care professionals, peers and family. In addition, these are often a confusing mixture of viewpoints about the body presented as facts. There is often a contradiction in advice and information regarding the pros and cons of managing the menopausal symptoms, such as HRT (Bellerose & Binik, 1993) and the potential changes in body image as a result. Therefore a woman's uninformed treatment choices have the potential to do them and their bodies serious harm (Rossouw et al., 2002) and make them feel like they are not in control of their bodies (Brayne, 2011). Women often expressed difficulty in voicing their experiences and lack of control of their body choices as they lacked a vocabulary to explain their transition, bodily changes and management (Banister, 2000). This not only undermines their trust in the medical profession advising them, but encourages them to try and regain a feeling of control of their bodies by turning to alternative or complementary solutions that are often not grounded in evidence (Brayne, 2011; Rubenstein & Foster, 2013).

The simultaneously positive and negative experiences mentioned in the previous theme have also caused confusion. Women sensed an ambiguity between the experience of changes in body function, appearance and their self-presentation. They were now experiencing a double jeopardy of ageism and sexism, and balancing this incongruence was sometimes difficult to manage (Koch et al., 2005). The menopause represents a new life transition linked with ageing,

particularly due to the higher risk from age-associated diseases, such as osteoporosis (Deeks & McCabe, 2001). Many women discussed reassessing their roles in society and their identities, as the 'me' that had always existed inside the body was becoming inconsistent with their changing visible bodies, influencing the impressions that others made about them (Hvas, 2006).

A 'double consciousness' was reported (Banister, 2000; Ussher, 1989) between information received and societal expectations. On the one hand the menopausal women wanted to accept ageing, be carefree and experience a better quality of life. On the other hand they did not want to feel undesirable, invisible or less socially influential. They wanted to gain attention and approval from others by remaining young and attractive (Banister, 2000; Brayne, 2011; Dillaway, 2005; Rubenstein & Foster, 2013; Stephens, 2001). Those who reported high levels of self-objectification felt negatively about both their attractiveness and value in society, taking longer to adjust to the menopausal transition. They had the greatest difficulty in no longer being the centre of attention because of changes in appearance, with some even seeking attention through other methods such as hypochondria (Rubenstein & Foster, 2013).

Discussion

This paper reviews the literature over the last 20 years examining the menopausal transition and body image. Overall, this research topic is at its relative infancy, and has thus far explored potential relationships and reasons for these relationships. The findings in this review have emphasised the complex role of body image and body image concerns during the menopausal transition. Importantly, the dearth of answers highlights gaps in knowledge, provides rationales for future research and guides practice and policy towards the next steps.

The mix of methods included in this review provides a vital overview, and highlights their complementary nature (Hagger, 2009; 2010). An excellent example of this is the attempt to linearly measure if a person's perceptions of the menopause and their body image are either positive OR negative, when this research clearly highlights that responses to a change or situation are complex. The women included in the studies in this review emphasised multiple reactions to the menopause and the associated bodily changes. The bodily transition was perceived as both positive and negative simultaneously, and as a result confusing to the individual trying to manage the changes. This cannot always be discovered or further understood from the crude quantitative Likert-scaled continuum usually asked of participants[8] and may result in equivocal findings in the literature (corroborating with the conclusions in Deeks' (2003) review). This provides information on how to increase the validity of scales measuring the menopause and bodily change, and actually examines the complexity of how women feel. It is recommended that a scale is developed to measure these intricate evolutions. This should allow for the possibility of a multiple range of both positive and negative feelings in response to each bodily change, with individual coping solutions. The use of the resulting measure should aim to help improve menopausal women's quality of life.

It is encouraging that women experiencing less menopausal symptoms and who have more positive body image perceptions tend to report a high quality of life (Jafary et al., 2011). However, it is still unclear how this can be achieved and how women can best manage the changes. Evidence demonstrates the importance of the subjective experience of menopause and its associated symptoms. For example, menopausal attitudes do not only influence perceived symptoms (Ayers et al., 2010), but also perceptions of body image. This suggests that subjective

[8] However, we do acknowledge the usefulness of these types of measures to answer other research questions.

experience is a stronger predictor than the previously predicted impact of physical changes (e.g., weight gain and body shape change) on symptoms experienced, coping ability and self-presentation concerns (Bloch, 2002) . Individuals with different attitudes and cultural backgrounds experience the menopause differently, so there is ambiguity as to whether the same 'solutions' to the menopausal 'problem' will work for all women, or whether individualised support is more appropriate (Jafary et al., 2011; McKinley & Lyon, 2008).

Implications

This systematic scoping review pulls together the findings of the heterogeneous research examining the menopausal transition and body image in the last 20 years. The remainder of the discussion focuses on the conclusions made by the papers in the review regarding the implications for policy, practice and research. Not all of the papers discussed each type of implication and so we encourage readers to be cautious as these sections are only in reflection of those papers that did (see Table 2.2 for detailed list).

Table 2.2: List of papers that discussed each implication.

Implications	Papers that discussed these implications
Policy (n=4)	Bannister, 2000; Brayne, 2011; Jafary et al., 2011; Koch et al., 2005.
Practice (n=6)	Bannister, 2000; Brayne, 2011; Hvas, 2006; Jafary et al., 2011; Koch et al., 2005; Stephens, 2001.
Research (n=12)	Ballard et al., 2009; Bannister, 2000; Bellerose & Binik, 1993; Bloch, 2002; Brayne, 2011; Deeks & McCabe, 2001; Dillaway, 2005; Jafary et al., 2011; Koch et al., 2005; McLaren et al., 2003; Rubenstein & Foster, 2013; Stephens, 2001.

Implications for policy. Research on the menopause and body image has the potential to 'plant seeds of political correctness and action among women' (Banister, 2000, p. 760). Presently, the menopause is often perceived as a taboo subject[9] engulfed in stigma that often makes talking about it uncomfortable and women feel that their transitioning bodies are not accepted in society with confusing outcomes for their body image. Consequently, knowledge and understanding of the transition can be lost to the detriment of women's support and education to best cope with the symptoms and body image changes during this time. This results in the isolation and confusion of the stigmatised group potentially creating an increase in self-presentation concerns. The implications for policy in this case are therefore not just directed at policy makers, but urging women to become more politically active. Women need to challenge health care decision makers and structures that affect the quality of life in women and society, such as the media, medical profession, researchers and social support focusing on women's

[9] For example, this is referred to as the M-word in Brayne's book (2011).

health. It is important for women to strive for further research, and better education and support over the menopausal transition to take better control over their bodies and their lives during this time.

Implications for practice. As with policy implications, the recommendations for practice were largely based around the provision and quality of education and support. Currently women receive inconsistent and confusing messages often by deleterious fads lacking research fuelled by the media. Evidence-based information and provision is needed to help women self-manage their transition and to understand that culture, attitudes, lifestyle and body image can influence quality of life. This in turn, should encourage women to feel empowered and autonomous over the decisions about their bodies and lives, and increase their wellbeing and feeling of worth in society.

It would be beneficial if health practitioners implemented programmes that provided evidence-based information to familiarise menopausal women and their partners with the physical, psychological and social aspects associated with the menopause. Support groups and regular meetings with higher quality educational (not just biomedically-focused) provision can supply valuable social support. Encouraging dialogue with others experiencing the transition can create a feeling of attachment and belonging, reduce feelings of isolation, and help women to improve their attitudes towards the menopause and their bodies. A fuller understanding of how to accept and cope with bodily changes can increase a woman's feeling of control and confidence over her body, and potentially reduce self-objectification and self-presentation concerns. This, in turn, should decrease appearance-contingent self-worth, but improve overall feelings of worth and quality of life.

Health practitioners can engage women to articulate personal meanings of the menopause, critically reflect, and create new positive directions in their lives. This should facilitate consciousness raising to encourage a positive attitude towards a woman's body and ageing women in our society. Practitioners need to treat women as the experts of their own experience. They need to encourage them to be more active in their own health through self-management in order to feel more competent and autonomous about their body. Often women reported that medical professionals made sweeping judgements based on their stage of life. Many symptoms can be explained away by the menopause, which can lead to shallow investigation and misdiagnosis of conditions. Healthcare professionals should not assume that a menopausal woman will suffer symptoms from a hormonally-deficient body that needs to be treated, but instead provide individualised information, examination and choice that is sensitive to a woman's body image concerns. It is important to avoid unnecessary negative expectations and discussion of undetermined future risk, and instead focus on a current agenda of coping with real-life problems and experienced bodily changes (both gains and losses).

Implications for research. As a result of this exploratory-based research, it is now evident that there is a necessity for well-designed studies, such as longitudinal; cohort; diary; life history; mixed methods; and prospective investigations. It is important that future articles provide a background to the cultural and societal views to which the research relates. Future articles should also include explicit information about the sample regarding ethnicity, sexual orientation, menopausal and hormonal status. Currently, the majority of research investigates heterosexual white educated women. There is therefore still a need to examine the body image experiences of those whose self-objectification may not be heightened by the judgement of a male partner; those from other cultures with different societal norms and attitudes; those who

have and have not had children; and those of differing education levels, employment types, social economic status and relationship status.

It is also recommended that more studies measure menopausal symptoms, as well as status and attitudes, in relation to body image. Further research needs to consider the extent to which body consciousness actually affects symptoms, and to examine the influence of symptoms on vitality, and its impact on wellbeing and health behaviour. There is also equivocal research regarding the influence that hormonal change has on the menopausal experience, creating a need for a prospective study investigating body image perceptions before and after a hysterectomy with and without oopherectomy. This review highlights the dearth in qualitative research examining the surgically- and medically-induced menopause and body image..

Presently, there are a range of body image variables being measured in the studies. Some are negatively focused and therefore have bias limitations. For example, body dissatisfaction focuses on how unhappy a person is with their body, rather than both how positive and negative a person feels about their body. The employment of this questionnaire assumes a negative association with body image and asks the participant to focus only on negative aspects, skewing the overall findings about how the person feels about their body. Others lack detail defining how these variables fit into the larger concept of body image. There is the big question as to whether body image is a predictor or outcome of menopausal symptoms, or whether it is a symptom itself. This incongruence creates difficulty when comparing research findings. Vitally, there is no research to date examining how concerns regarding body image changes during the menopause affect behaviours, and the methods women use that are most effective in reducing those concerns. The question of if, and then how, daily fluctuations in symptoms affect body image

also remains to be addressed. This information can inform intervention design, support groups and educational materials aimed at encouraging adaptive coping with bodily changes that occur during the menopausal transition.

Conclusion

This review examines the literature that investigates the menopause and body image over the last 20 years. Currently, the research consists of exploratory-based studies that highlight the complexity of body image and menopausal perceptions, and the importance of researching this field further to aid adaptive coping and self-management across this transition. Vitally, the current research has started laying the foundations of understanding, and this review makes recommendations on how to build on policy, practice and research in the future.

CHAPTER 3

The Development of Synchronous Text-based Instant Messaging as an Online Interviewing Tool

Gemma Pearce, Cecilie Thøgersen-Ntoumani, and Joan L. Duda.

A version of this manuscript has been accepted for publication in

International Journal of Social Research Methods

Abstract

The article reports the development of a synchronous text-based online interviewing tool with a continuity of private discussion that is not achieved in open-ended questionnaires, email interviews and online discussion boards. The participants were women who had undergone a surgical or natural menopause, who in a pilot interview highlighted the potential sensitivity of this subject and inspired the implementation of this method. The overall feedback was positive with the main advantages centred on feelings of anonymity, convenience and a more comfortable interview environment. Disadvantages included lack of body language and technical issues with computers. This technique ensures a degree of confidentiality while still obtaining depth of enquiry, where other qualitative methods potentially risk invading a participant's privacy. It can be offered both alongside other interviewing techniques to allow participant choice, and on its own when exploring sensitive and personal topics or when extra participant anonymity is appropriate.

Keywords: data collection; internet research; synchronous interviews, electronic; menopause; hysterectomy; instant messenger; online technologies; qualitative; psychology.

Introduction

The quality of research is completely dependent on the quality of the data gathered. In the 1920s, Edward Thorndike provided the first evidence that people adopt personality traits based on another person's appearance and presence; the halo effect. Ever since, a person's self-presentation (Goffman, 1959; Jones, 1964; Leary, 1996) and their complementarity (Bohr, 1998) with research methods have been two very important considerations in scientific research. Self-presentation is not usually a conscious act and reflects an on-going concern with the impressions individuals portray to other people in the hope that they will be judged positively. Self-presentation is a complex topic based around how we judge ourselves and how we manage the image we project to others emotionally, physically, financially, cognitively and behaviourally (Leary, 1996).

In relation to science, researchers need to consider how participants' self-presentation concerns might impact on the findings and therefore possibly change the accuracy of the results. This social desirability bias is more commonly reflected upon by critical realists in social science research, especially in qualitative studies where the interviewer effect is more pertinent (Stacey & Vincent, 2011). Participants may give answers to interviewers that make them appear like a 'good' interviewee, seem an expert on the topic, or provide more socially acceptable responses (Smith, 1995). Further, the researcher can be viewed as an authority figure, and the participant may wish to give a pleasing impression, or feel uncomfortable about opening up when they perceive an unequal power relationship. In an attempt to reduce these concerns, researchers can carry out the research in a neutral or familiar setting to the participant, pose open, non-leading questions, and build rapport by starting with more general questions and then funnel down to

specific queries (Smith, 1995). Participants may be distracted by their interest in the researcher and start asking questions of them or be influenced by the researcher's personal factors, such as gender, age and clothing, in addition to the actual questions asked and their phrasing (Lewis, 1995). The researcher, therefore, needs to disentangle how their active participation influences the results of the study (Dockrill et al., 2000).

In science, complementarity (Bohr, 1998) is referred to as the impossibility of separating the behaviour of a system and the interaction with its measuring instruments. The idea is more commonly used in quantum mechanics, but is highly relevant to any research with living organisms, especially work conducted within the social sciences. In fact, the assumed existence of complementarity is one of the key arguments for the use of mixed methods to investigate topics in social sciences (Tashakkori & Teddie, 2010). It is therefore important to reflect upon the research design used in each study and the resulting influence on the participants and researchers involved in this process. In recent times, there has been an increase in the use of technology to support research studies. It is therefore important to consider how the technologies enhance or detract from our inquiries.

Over recent years, researchers have been exploring a range of data collection methods using computer technology and the internet. This has enabled ease of access to larger populations and increased response rates for survey-based studies. As online questionnaires became more accessible and reliable, researchers explored the use of open-ended questions more frequently within these surveys (Dillman et al., 2009, Reardon & Grogan, 2011), and through other internet-based means, such as email interviews (James, 2007, Meho, 2006, Murray, 2005, Murray & Sixsmith, 2002) and online discussion boards (Im, Liu, Dormire & Chee, 2008;

Moloney et al., 2004, Seymour, 2001). Instant Messaging (IM) services, such as MSN Messenger and Skype, have been recommended as online interviewing tools, as both enable a synchronous method of exchange between the interviewer and the participant (Kazmer & Xie, 2008, Opdenakker, 2006). This potentially solves the problems with discontinuous communication in previous online interview techniques (James & Busher, 2006). Compared to discontinuous tools such as email interviewing, IM is a conversational form of dialogue, which increases the validity of the method (Brewer, 2000).

There are three main methods of communication through a private forum when using IM services such as MSN Messenger and Skype. These include microphones (aural-IM), web cameras (visual-IM) and an area on which to type on the screen in a conversational style (text-IM). MSN Messenger was originally developed as a synchronous text-IM service, and Skype was a video-chat service predominating in aural and visual forms of IM. Both of these IM services have now developed and provide the user with the ability to choose from a combination of synchronous text, visual and aural-IM services. Overall, IM is better suited for research when interview times can be organised in advance, as opposed to random cold calling. Aural-IM using a microphone is equivalent to an organised telephone interview (Drew and Sainsbury, 2010, Feveile et al., 2007) and can be combined with visual-IM using a webcam in order to add communication through facial expression and body language (Hanna, 2012). Although research has been investigating the use of text-only interviews through a range of methods, the unique feature of using an Instant Messaging service to carry out interviews is the ability to carry out a synchronous discussion with the participant (Brewer, 2000).

Conferencing software has been explored as text-based interviews by O'Connor and Madge (2001) with the claim that they are synchronous. However, in this research the interviews were not truly synchronous as they were not carried out with an interviewer and a respondent online at the same time. The interviewer posted a question and the participant responded anytime convenient to them. Although these interviews eliminated the need to set up a mutually convenient interview time, it reduced the continuity of interaction with the interviewer and the immediacy with the topic. Thus far, the existing text-based interviewing tools lack the continuity in discussion that is achieved through face-to-face, telephone and online visual/audio interviews (James & Busher, 2006).

This article presents the development of a synchronous text-IM tool implemented as part of my doctoral research (see conference presentations: Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2010; 2011). The tool was used within a qualitative study that aimed to investigate the experiences of women who had either undergone a hysterectomy resulting in a surgical menopause, or a natural menopausal transition. Prior to this qualitative study, a pilot focus group interview had been carried out with women experiencing the menopausal transition who were recruited using convenience and snowball sampling.

It became clear through talking with the women that the menopause was seen as a taboo or sensitive subject to discuss, especially if discussing the topic with those who were not or had not experienced the menopause themselves. The participants highlighted during discussion that some women may be less likely to disclose personal information to somebody younger than themselves who has not yet experienced the menopause. For example, women experiencing the menopausal transition may experience symptoms that may cause embarrassment during

discussion, such as changes in sex drive, dyspareunia (pain during sex), and heavy menstrual bleeding. Additionally the menopausal transition is associated with bodily change and concerns, which is considered a sensitive topic in the extant literature where computer-based interviews are considered appropriate (Lee & Lee, 2012).

The researcher conducting the interviews was a premenopausal 27 year old female at the time the research took place. As we wanted the interviewee to feel comfortable to open up and discuss their experiences, we considered alternative techniques to the common face-to-face interview. A range of potential methods of data collection were discussed with the focus group interviewees. A consensus was reached that a method where the participant felt anonymous, yet was still engaged in a conversational style of dialogue was considered most suitable. We felt it was important to use a method that encouraged the participants to discuss personal matters with the interviewer to increase the credibility and depth of the research. We therefore judged the synchronous text-IM interviewing method to be the most appropriate to the topic and population of our research. The aim of this piece of research was to develop and evaluate the synchronous text-IM method. This occurred concurrently with the qualitative study examining the women's experiences of the menopause; however the results from the interviews are discussed in chapter 4 (Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2013) and chapter 5.

Since the initial implementation of this method within this doctoral work, the synchronous text-IM tool has been successfully applied to research examining the experiences of "nonheterosexual" people living with chronic illness. The authors use the implementation of this tool to further reflect on the use of synchronous text-based online interviews in psychology (Jowett et al., 2011). Compared to email interviews this synchronous method takes on a style

closer to that of a conversation, while also allowing the participants to see and potentially reflect upon the dialogue so far via visual written 'record'. Unlike using the visual/aural –IM during interviews, this method reduces the amount of personal contact, such as communication through body language, voice and facial expression. Although this is possibly a disadvantage compared to a face-to-face interview, this technique has the benefit of an increased level of anonymity between the participant and the researcher.

Importantly, the use of this tool has the potential to dehumanise the interviewer and disperse any perceived unequal power relationship between the researcher and the participant, distorting any social desirability bias and reducing inhibition of the interviewee (Stacey & Vincent, 2011). This, in turn, potentially results in a richer and more honest interview. Consequently, the synchronous text-IM method should be especially beneficial when interviewing hard-to-reach populations or when the interview topic is of a personal, illegal or sensitive nature. Due to the complementarity between the participant, researcher and the research measure being used, we believe that this extra guard of anonymity will reduce the possible biases involved between the researcher and the participant, therefore increasing the validity of the interview.

Using this technique could encourage participants to feel more at ease and comfortable to discuss the topic in more depth compared to a face-to-face interview, while keeping more verbal and affective intimacy than in an email interview (Hu et al., 2004). However, the details of the logistics and utility of this synchronous text-IM tool are still missing from published research. Additionally, as the synchronous text-IM tool has so far been applied in ideographic phenomenological research, we felt it was important to gather feedback from the participants of

this innovative online method. This paper therefore empirically examined how the synchronous text-IM method can be operationalised while gathering feedback from participants to aid critical reflection and future development of this method.

Methods

Participants

We recruited twenty female participants, aged 46-59, through community advertisements. The advertisements were distributed as posters with pull off tags detailing my contact details (see appendix 1 for examples). These were placed on bulletin boards and, most successfully, on the inside door of individual toilet stalls in places such as petrol stations, shopping and leisure centres. The posters in women's toilets enabled women to take a tag in privacy, thus increasing confidentiality and allowing them to control any self-presentation concerns. The text-IM method not only facilitated participant anonymity, but also provided more recruitment choice, while reducing effort in terms of location, travel and associated logistical challenges (Moloney et al., 2004). Consequently, participants were recruited from all over England.

This research recruited women who had either undergone a surgically-induced menopause (n=8) or were experiencing a natural menopause (n=12). The former had all undergone the minimum of a total hysterectomy because of a medical condition and were pre-menopausal prior to the operation. The latter discussed their experience of a natural menopausal transition ranging from the perimenopause to the early postmenopause stages. All of the participants described themselves as white, living in the UK and having children.

Procedure

An information sheet was provided to participants (appendix 3), along with the opportunity to discuss any queries with the researcher throughout all stages of the research process. As recommended by Dickson-Swift et al. (2007) contact details of menopause associations for professional advice and support were provided to participants as part of their information sheet. Participants completed a consent form (appendix 4) before participating in the one-to-one online interview with me. Participant confidentiality and anonymity were ensured and the study was approved by the research ethics committee of a large University in the UK. Participants were informed that they did not have to answer a question they were uncomfortable with, and of their right to withdraw from the study. All consent forms were separately stored from the interview data and participants were assigned ID codes and pseudonyms from the beginning of the research to protect participant identity.

The interviews took place at the participants' convenience. Therefore, the time it took to recruit the participants and their availability determined their interview order. After the first ten (half) were interviewed, their feedback on the synchronous text-IM was analysed in order to incorporate any feedback into the use of the tool for the remaining ten interviews. The interviews were conducted using MSN Messenger as the online interviewing tool. An account was set up and participants were provided with a unique username and a log in password to ensure anonymity. The interviewer gave participants instructions of how to use MSN (appendix 5) and informed the participants that she would be available on email and signed on to MSN in the hour prior to the scheduled interview to offer assistance or answer any questions. We felt this was very useful as sometimes participants came on early to double check they understood the

software and ask the interviewer questions about MSN or the research. Participants were asked to confirm their ID code before the interview begun (see figure 3.1 for example conversation using MSN).

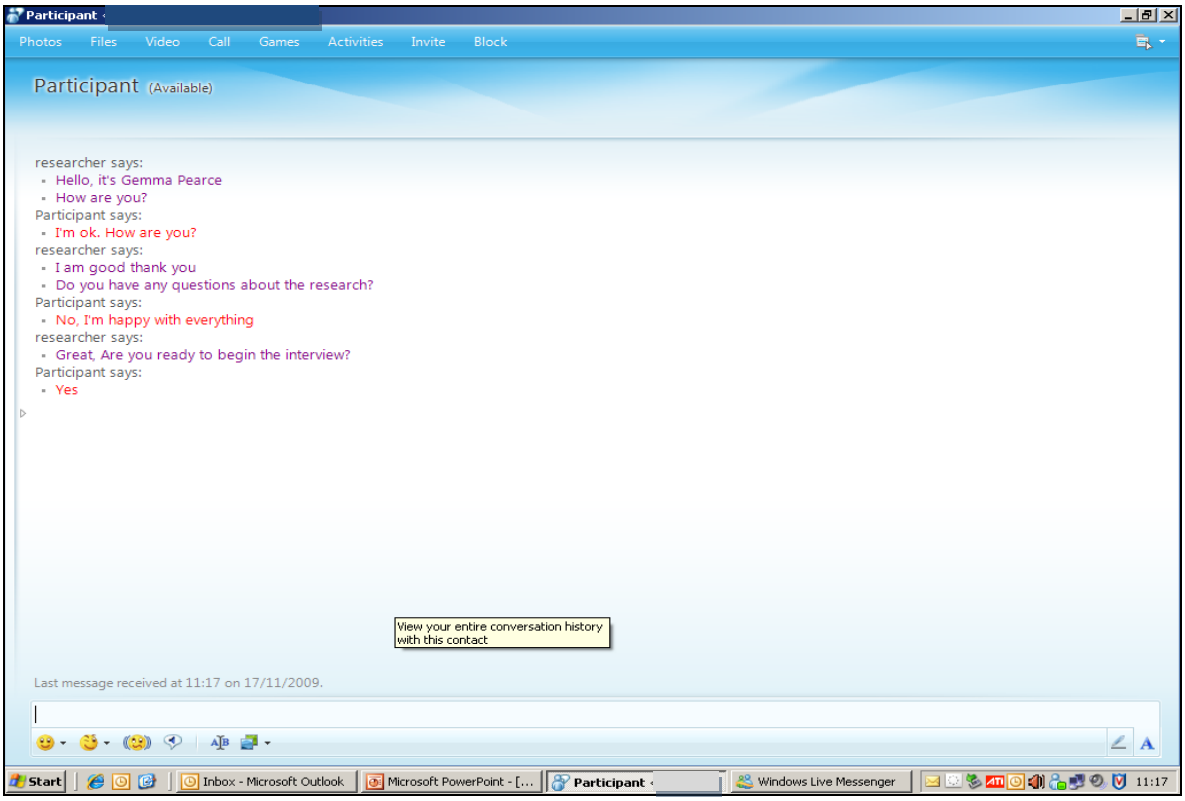

Figure 3.1: Example of MSN conversation (N.B. due to ethical reasons, this conversation is only an example demonstration between two researchers and does not involve any participants from this research. Email addresses have been blocked out).

The interview schedule was semi-structured, developed and refined during and following pilot interviews. The final interview comprised open-ended questions relating to each woman's experiences of either their hysterectomy or natural menopause. The interview schedule outlined the areas of interest, but was not prescriptive, which therefore permitted iterative exploration of the topics that emerged. The initial question asked participants to tell the researcher about their

experience of the menopausal transition, and then prompts were used to explore emergent topics, such as 'How did that make you feel?' and 'How did you deal with that?' (see appendix 6 for the more detailed interview structure using MSN). No specific personal or sensitive questions were asked but if these topics emerged then they were discussed with the participant. Interviews lasted between 90 minutes and two hours and the data were transcribed automatically by the MSN Messenger software. At the end of the interview, participants were informed that if they wished to discuss any further thoughts regarding the interview, they were welcome to send them via email or to organise another time to discuss them in MSN. These were then added to their transcript.

At the end of the interview, participants were also asked permission if they were happy to receive some short-response questions to evaluate the online interviewing method. All participants agreed to this. Within a day of their interview, participants were emailed a copy of their interview transcript for their reference and further comment, along with five questions to evaluate the synchronous text-IM tool. These asked for their opinion on (i) their experience using the text-IM interview method, the respective (ii) advantages and (iii) disadvantages of the online interview, (iv) their preferred method of interview, and (v) if they had any additional comments. This procedure facilitates participant-researcher collaboration and increases credibility by enhancing the contribution of participants to (i) understand their individual contributions and (ii) represent their contributions in the final narrative (Creswell and Miller, 2000). Questions could be asked by the participant regarding the research at any stage.

Based upon the feedback from the first half of the participants interviewed, we made two logistical changes that we felt would improve the synchronous text-IM interview procedure for

the remaining ten interviewees. Firstly, some participants had mentioned that they were more familiar with Skype as an IM service than MSN, so we also set up a neutral Skype account with a unique username and password for participants to use anonymously. The last ten participants interviewed were then given a choice of using either MSN or Skype for their synchronous text-IM interviews.

The second change was based on the issues with technology that were reported by some of the initial participants. Initially, participants were required to download the MSN software in order to take part in the interview. This was fairly simple to complete; instructions were provided and it did not take long. However, some of the participants who did not use MSN felt negatively about having an additional task to carry out prior to the interview, and as they did not have a use for MSN afterwards, they wanted to remove it from their computer. As a result, we found a version of MSN available to use directly through the MSN website, and so the remaining ten participants were not required to spend time downloading the software and removing it afterwards.

The results of the first ten interviews were presented at a conference (Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2010) providing an opportunity for further reflection upon the use of the online interview process with fellow researchers. Some of the initial participants had used emoticons during their interviews to represent their emotions and express themselves. All interviewees have the facility to use emoticons during the synchronous text-IM interview, but not all interviewees may be aware or know how to use these. In order to inform and enable all participants with the choice of using these emoticons, instructions on how to use them were

developed and given to participants at the beginning of the interview with an opportunity to practice if they wished.

Analysis

A qualitative conventional content analysis (Kondracki & Wellman, 2002) was used as a means to understand the phenomenon under study (Downe-Wamboldt, 1992) by identifying patterns within the participants' feedback to interpret the content of the text (Hsieh & Shannon, 2005). As the first author, I read the data repeatedly to immerse myself in it and gain an overall sense of the findings. I then sought codes in the data by highlighting keywords and making notes of emerging patterns, collating these into meaningful categories in relation to the research (Patton, 2002).

Results

Overall, 17 out of the 20 participants gave feedback on the synchronous text-IM method with many answers overlapping, and therefore saturation was achieved. Overall, the interviewees' perceptions of the interview experience were positive and they liked the idea of online interviewing 'clever idea' (Anne). Some participants expressed enjoyment of the general interview experience, 'It was interesting and fun to chat to you. It was good to know that my experiences could be helpful in supporting other people' (Trudy). When asked for respective advantages and disadvantages, all of the participants mentioned perceived benefits of the text-IM method, and all but one noted drawbacks. It is important to note that the provided pros and cons were not always personal to the participant, but sometimes also discussed in relation to empathy for others being interviewed or the interviewer. For example, some participants preferred the

method, noted the advantages for themselves and then discussed why other people may not feel the same as them.

Advantages

The participants' reported perceived positive attributes of the text-IM method centred on feelings of anonymity, 'makes you feel a bit more anonymous and less vulnerable' (Trudy); openness, 'it is easier to answer personal questions' (Sophie); and convenience, 'I think the process is more relaxing, convenient and less intrusive' (Zoe). Participants reported preferring the anonymity of the interview and feeling more comfortable to discuss personal or sensitive topics, 'I also think that this form of interview benefits those participants who feel embarrassed or intimidated by face-to-face methods or difficult subject matter' (Betty). They commented on the sensitivity of the subject and the suitability of this method: 'Good for more embarrassing subjects' (Nina); 'makes it all less formal and for some people I imagine that would make it easier to open up' (Zoe) and 'say what you think/feel over MSN' (Helen).

The logistics of the method were also an important positive factor as it helped the participant to feel more autonomous over their interview environment, 'It seemed more flexible and I felt comfortable and relaxed i.e. my own interview was carried out in the evening when I got home from work' (Sophie). They reported the convenience and choice of interview place and time as 'hassle free' (Val) and more guided to suit the participants' needs. 'It was a more relaxed atmosphere, as I was in my own home' (Jill). Participants felt in control of the interview while it was being carried out due its flexibility, 'it was possible to interrupt the interview' (Claire). Some participants' felt that as they were in their own environment and did not have the visual cues of the interviewer, they were more focused on answering the interview questions and

reflecting upon their experiences than they would have been in a face-to-face interview. Roz felt she was 'more focused on the questions asked, not distracted by assessing a different environment, who the interviewer is, who she reminds you of etc'.

The action of typing was perceived as beneficial because it enabled participants to give 'more coherent answers' (Claire) and 'I found it allowed me to think about my answer' (Yvonne). The text-IM method enabled the participants to engage in a reflexive process, 'It was interesting and useful to reflect on the subject' (Roz), and potentially resulted in a richer interview. Anne said 'it did help me come to terms with some things. Also a virtue that the interviewee can review the transcript immediately and recall the conversation, and gain some more sense from it'. They also felt that not only could they be more coherent through the process of typing, but they also felt the interviewer was more coherent and understandable, for example Sophie said 'there is no chance of mishearing a question'.

Disadvantages

The two main perceived negative attributes of the MSN method revolved around the absence of personal communication and issues with technology. Participants discussed that a drawback of online text communication was the lack of cues from not being able to see the interviewer's body language or hear their tone of voice, 'communication is generally compromised by the mediation of a machine' (Betty).

> 'The disadvantages are that there is no body language or eye contact so you can only go on the flat value of the words written, with no visual clues as to the real meaning

behind them. Because of this you do not build up the same rapport with people' (Trudy).

Although participants felt that the maintenance of their own anonymity was a benefit, some felt that the interviewer's anonymity was a disadvantage. 'The person you are "speaking" with is still anonymous as you don't have a visual picture of what they look like - this could be a disadvantage for some' (Lily). One also reported the distraction caused by the anonymity of the researcher, 'I was wondering what you looked like all the time' (Nina).

Although most participants felt this method was logistically beneficial, some participants reported issues regarding typing instead of talking to express their answers 'it required a little more effort to phrase answers written in English as succinctly as possible' (Claire). 'It perhaps didn't flow as well' (Val) and 'occasionally the line of questioning gets a little confused if both the participant and interviewer type at the same time. It is intense. I might have said more if talking as it is easier to do' (Roz).

Many of the participants talked about the benefits and problems from three different points of view: their own; another person participating in the interview and from the researcher's point of view. For example, Yvonne commented on suitability of the text-IM method for others, 'MSN may also be an issue for some people with poor literacy or IT skills". Sophie felt the text-IM method was the most suitable for her but also commented from a researcher's point of view,

'I can't think of any disadvantages for me as an interviewee. There is a chance that answers are given in a less spontaneous manner than in a face to face interview, so this might be a disadvantage for the interviewer'.

Preference

When asked which method of interview they preferred, thirteen participants preferred the text-IM method, two participants said they would have preferred a face-to-face or webcam interview and two participants had no preference regarding which interview method was used and were happy using any. Additionally, five of the women who preferred the text-IM method stated that different methods were beneficial for different purposes and a variety could be offered to allow the participant choice, "I personally prefer the online method from pure convenience, but I do enjoy meeting people so you could always offer a face-to-face as an alternative" (Trudy).

Interviewer's perspective

This section aims to summarise the experience of the researcher with the synchronous text-IM method in order to provide future researchers with some insight on the utilisation of this tool.

As researchers, we were concerned that participant's would react negatively or be less likely to discuss their experiences openly when being interviewed by a 27 year old premenopausal woman based on findings from the pilot focus group interviews. The ensured anonymity from the interviewee never meeting the interviewer helped to reduce the concerns of social desirability bias and investigator effect. Although we do acknowledge that this depends on the individual being interviewed, and there is always an element of subjectivity to interview research.

The lack of body language or voice tone meant that sentences may have been interpreted more at face value by both the interviewer and interviewee. However, as with face-to-face interviews, the interviewer could use reflexive prompts to double check they had interpreted the

sentence correctly to how the interviewee intended it, and encourage the interviewee to go in to more detail. Often the women used metaphors and similes and/or used the emoticons to help them express themselves, which often provided the researchers with rich, unique and interesting quotations about their individual experiences. Clearly, emoticons do not replace what is lost from no body language, but the benefit from the additional cloak of invisibility provided by the tool may enable the participants to be themselves more and provide a rich interview in a different way. It is important for researchers using these techniques in the future to take these benefits and limitations into account and aim to use the most suitable method for the topic and participants being interviewed, or provide a choice of multiple interview methods if appropriate.

During the actual process of the interview, interviewees needed more time to type their answers to the questions compared to a face-to-face interview. This enabled the interviewer more time to ensure they were asking all intended questions in the interview schedule. It also allowed the researcher to double check that all relevant or unclear issues had been examined in depth. For example, sometimes an interviewee will answer a question with multiple interesting sentences and the interviewer is spoilt for choice as to which sentence they explore first, which in turn can lead to more interesting topics. The online interview allowed the interviewer to double check that when each of these came to a natural end, that other unexplored sentences could then be examined further. This was considered an advantage from the researcher's perspective, giving the feeling that the interviews were of rich quality.

Logistically, the fact that the interview could be carried out from any computer with the internet allowed the interview times to be much more flexible. The interviews could be carried

out by the researcher from home or work and were offered to participants at their convenience any time of the day, any day of the week.

Participants were told that if they wanted to go for a toilet break or to go and get a drink during the interview then they could, they just had to say they would 'be right back' or 'brb' for short. Many participants said that they liked the flexibility of this. As researchers, we viewed this as an advantage of the method as participants were able to feel more in control of the interview.

The interview transcript is produced as a result of the synchronous text-IM interview and therefore this saves manually typing up the transcription afterwards. Although this is positive as it can save time and money, it can also be considered a disadvantage as through the process of transcription a researcher can familiarise themselves with the data during a stage of their analysis. However, as some research teams pay assistants to transcribe their interviews for them, this replaces that need. Additionally, this enabled the transcript to be sent to the participant soon after the interview while it is still fresh in their mind, providing them with an opportunity to add anything they felt they had forgotten to say in the actual interview.

Discussion

This study investigates the usefulness of synchronous text-based IM for interviewing women about sensitive health topics, specifically women who have undergone a hysterectomy leading to a surgical menopause, or a natural menopausal transition, and positives and negatives surrounding bodily change and symptoms. The synchronous text-IM method was used because of its utility, innovative nature and the fact that it is complementary to the aims of the research. This method enabled the recruitment of a wide but homogenous sample from across the nation.

Due to the sensitive and personal topics within the chosen area of inquiry, an innovative synchronous online interview method (text-IM) was adopted and developed. This paper develops the existing literature by examining the utility of this method and providing feedback from participants who have been interviewed using this method. The method is reflected upon as an additional tool for the researcher to choose from their methodological toolkit when appropriate.

Our findings were concordant with the assertion that this methodological tool facilitates participant anonymity alongside the provision of more choice and convenience in terms of location and travel (Moloney et al., 2004). The majority of participants found the synchronous text-IM interview a convenient, flexible and encouraging method. They said it allowed them to feel comfortable and relaxed so that they could open up and discuss personal matters knowing that they were not only anonymous in the research report, but to the researcher as well. The possible impact on participant responses to the researcher's questions as a result of the different interview methods highlights how the complementarity (Bohr, 1998) of this research method can help to reduce participants' self-presentational concerns, distorting the social desirability bias and reducing the participants' inhibitions (Stacey & Vincent, 2011). However, it should also be acknowledged that there is the risk of embodied dislocation if participants seize the internet mediated interaction as an opportunity to deliberately misrepresent themselves. The veil of opaqueness the text-IM method provides can enable the participants with the freedom to manage the image (Goffman, 1959; Jones, 1964; Leary, 1996) they project to the interviewer without the accountability of identification. We feel that this was unlikely in this research though as participants were approached as the experts of their own experience and it was made clear that their real-life experiences could help to aid our understanding of the transition. Many women

explicitly stated that they were glad that research was being carried out on this topic and were happy to be able to help. Participants understanding the importance of honesty and openness about their experiences in the research helps to reduce the risk of social desirability bias and increases validity (Dickson-Swift et al., 2007).

We felt that the three methodological developments incorporated between the first and second ten participants were beneficial. The change that made the most difference was changing from using the MSN software that needed to be downloaded by participants before the interview, to conducting the interviews directly through the MSN website. This reduced the amount of interview preparation time required of the participants and was much simpler to use. It also solved the problem that participants encountered of having to remove the software from their computer afterwards. This completely removed one of the reported obstacles of the IM service for participants.

The change that made the least impact was adding a Skype account to increase participant choice in what IM services they used. Skype was not chosen by any of the participants to use as an interview medium, however this is less relevant for the future utility of synchronous text-IM interviews as Microsoft bought Skype in 2011 and these technologies will be merged by March 2013. The third and final change was providing the participants with information and guidance on how to use emoticons and therefore showing them a method of expression. We acknowledge that this does not replace 'the input of aural, verbal, physical and emotional content' (Betty) in face-to-face conversation. However, it is a great improvement on open-ended questions in surveys and email interviews due to the increase in conversational fluency and the ability to express oneself.

The question of how researchers should interpret these emoticons still remains, and this will largely depend on the epistemology of the research, for example conversation analysis is not possible. Emoticons do not compare to the complexity of facial expression, but they do provide the researcher with further clues as to how the participant feels about the comments made, allows the researcher to adjust their reply as a result and aid rapport building. For example, if the participant tells a joke and puts a smiley face ☺, then the researcher can smile as well helping the participant to feel more at ease. Alternatively, if the participant shows a sad face ☹, then the researcher can take more caution and react empathetically.

The inability to interpret each other's body language, tone of voice and facial expressions with text-IM interviewing was seen as both an advantage and a disadvantage by the researchers and participants. In future, researchers wishing to include these physical, aural and verbal cues, a web camera and microphone can be added to enable teleconference interviews to be conducted via the internet. This reduces restrictions of both face-to-face and text-IM interviews allowing them to include extra modes of communication, such as the visual cues of participant distress, while still being completed at a distance and at the convenience of the individual participant. Individual preference is important to consider as some participants may feel that typing out their experiences is a more permanent and final version of their experiences, and instead prefer to discuss the topic in what is perceived to be a more fleeting face-to-face interaction. We felt it was important that the participant could double check their transcript and send emails with additional information after the interview to reduce the impression that the opinions they gave in the interview were rigid.

Alternatively, the synchronous text-IM interview provides a feature with a unique strength; the veil of opaqueness it provides to participants is usually impossible in qualitative methods. The synchronous text-IM tool ensures a degree of confidentiality and anonymity while still gaining depth of enquiry, where other qualitative methods potentially risk invading a participant's privacy. While body language and other non-verbal cues are useful in developing rapport with the interviewee, it may also ruin it by undermining their sense of a non-judgemental confidante and provides the risk of the interviewee being more conservative because of their biases towards the interviewer. The potential of online disinhibition (Suler, 2004) should therefore be reflected upon during the interview analysis of future studies using this technique.

A limitation we found whilst using online methodologies is that some women chose not to participate in the research due to unfamiliarity with technology. Although we purposively sampled women experiencing the menopausal transition, we also need to acknowledge the resulting sampling bias of only being able to recruit women who felt sufficiently confident to participate in a piece of online research. This can be overcome in future by offering a range of interview methods to the participants.

It was clear in the feedback that some found the synchronous text-IM method preferable due to the sensitive and personal nature of the topic and welcomed the extra level of anonymity and comforting interview environment. Some participants mainly preferred the synchronous text-IM method due to the convenience, while others felt they would have preferred to have the interview in person. We recommend that when offering a range of methods to participants, that a brief summary of advantages and disadvantages of each interview method be explained so that participants can make an informed choice. However, the synchronous text-IM interviewing tool

alone may be the most suitable tool when exploring some sensitive and personal topics, when aiming to reduce researcher bias or when extra participant anonymity is appropriate. Another benefit of text-IM is the ability for participants to review the transcript as it is written. This enables a level of reflexivity not previously available during a synchronous interview. Participants can reflect critically on their narratives and interact in an interpretative interview developing a greater understanding of their experiences (James & Busher, 2006). The present research was exploratory in nature, and therefore further inquiry is now needed to more extensively evaluate this tool.

It is important to consider how specific research with different populations and subject matter may or may not benefit from using this tool. As suggested by participants in this article, it may not be beneficial for people with poor literacy and Internet Technology (IT) skills, such as some older adults or less educated groups. However, it may be useful in creating a more informal atmosphere; when the subject matter is associated with embarrassment or shyness; when research budgets are limited; when questions are centred around topics of legality and crime (such as substance use and violence); and for interviews with those with hearing difficulties or that may prefer non-verbal communication (Benford & Standen, 2011; Ison, 2009). The use of IM services was also considered a novelty by the participants and the use of technology for the interview may provide a participation incentive when research is conducted with younger populations. Research with children can threaten validity due to the perceived unequal power relationship between the adult and the child, especially if the child views the adult as in a teaching or parental status, as they might give answers they think the adult wishes to hear (Clark & Moss, 2005a, Clark & Moss, 2005b). The synchronous text-IM method can provide a

non-confrontational interviewer-interviewee relationship and potentially encourage the child to express their thoughts more honestly.

Future research would not only benefit from examining a range of IM communication tools for interviewing, but also investigating these with a range of age, SES and ethnic groups. There is the potential for a reduction of biases between participant and researcher on some topics, such as genital mutilation or other sensitive cultural topics. Also as this article focuses on women's experiences, it would be useful to explore this method with men. It is additionally useful to carefully consider the importance of the gender of the researcher in affecting the participants' responses. In this instance, the women knew they were talking to a female researcher but the method allows for the 'masking' of various interviewer characteristics, such as the interviewer's age in the case of this study. I have been using these IM services for personal use for 15 years prior to conducting these interviews and so was very confident and felt well equipped to advise participants with any questions they had about its use. We recommend that when this tool is used in future research, the interviewee be experienced or receive training in IM services.

Conclusion

Over the last decade, the use of technology as a research tool has begun to develop. So far a limitation to text-only interview tools has been its asynchronicity. This is the first paper that evaluates the utilisation and logistics, and provides participant feedback for the online synchronous text-based tool using IM services. MSN Messenger and Skype are promising methodological tools to use in a variety of communication styles for interviews conducted globally with a variety of populations and subject matters. There is much scope for further

research to examine these media and allow researchers to offer more choice and comfort to their participants regarding the interview environment and level of anonymity. The text-IM method where the researcher and the participant can type to each other in a private synchronous conversational style is recommended, especially for interviews investigating sensitive and personal topics where an extra guard of anonymity could enable the participants to feel relaxed and more openly express their feelings and experiences. It is important for researchers to consider the potential self-presentation and complementarity with the research tools and group of participants being researched before designing their studies.

CHAPTER 4

Changing Bodies: Experiences of Women who have undergone a Surgically-induced Menopause

Gemma Pearce, Cecilie Thøgersen-Ntoumani, Joan L. Duda and Jim McKenna.

A version of this manuscript has been accepted for publication in *Qualitative Health Research*

Abstract

We aimed to explore the lived experiences of women who had a surgical menopause as a result of undergoing a hysterectomy with Bilateral Salpingo-Oopherectomy (BSO). We adopted a qualitative interview design using Interpretative Phenomenological Analysis, and recruited seven women aged 47-59. Synchronous online semi-structured interviews were conducted using the MSN (Microsoft Network) Messenger program. In the findings, we examine the prominent and under-researched theme of body image change. We discuss the women's journey from a deep internal bodily change, the meaning of this changing body image, through to the thoughts and behaviours involved with self-presentation concerns and coping with body image changes. A woman's perceived attractiveness and appearance investment are important factors to consider regarding adaptation to change over this transition. The findings might have implications for interventions designed to enhance mental well-being and increase health behaviours in women experiencing gynaecological illness and/or menopause.

Keywords: body image; health and well-being; interpretative phenomenological analysis (IPA); menopause; research, online;

Introduction

The menopause is defined as the cessation of the menstrual cycle (World Health Organization: WHO, 1996) and usually occurs in women between the ages of 45 to 55 (Williams, Levine, Kalilani, Lewis, & Clark, 2009). However, the overall transition from pre to post-menopause typically lasts four years and is often accompanied by symptoms such as hot flushes, redistribution of fat deposits, tiredness, memory loss and anxiety (National Institutes of Health State-of-the-Science Panel, 2005). Although an entirely natural stage in the female ageing process, the physical and psychological symptoms of the menopausal transition are often distressing, and associated with changed thinking about how the woman's body functions (Chrisler & Ghiz, 1993).

The natural menopause is a gradual process allowing the woman time to cope with bodily changes and their meanings, both in relation to their sense of self and within society. Nonetheless, one third of women aged above 65 will have undergone a hysterectomy because of gynaecological illness or cancer risk (Torpy, Lynm, & Glass, 2004). Hysterectomy can not only reduce previous pain and risk, but also improve quality of life and mental health (Thakar et al., 2004). However, hysterectomy is often accompanied by a bilateral salpingo-oopherectomy (BSO), where the ovaries and fallopian tubes are also removed (Elson, 2005). A BSO results in an immediate surgically-induced menopause because of a dramatic reduction in sexual hormones, and the loss of childbearing capability (Wade, Pletsch, Morgan, & Menting, 2000). This can exaggerate and lengthen menopausal symptoms for as much as twenty years post-operation compared to those experiencing a natural transition (Fong, 2008). Adaptation to the sudden menopausal changes as a result of the BSO might be more difficult compared to the

experience of a natural menopause because of greater feelings of distress, lowered self-esteem and impaired body image (Flory, Bissonnette, & Binik, 2005; Hickey, Ambekar, & Hammond, 2010). For the purpose of this article, we refer to body image as the "multifaceted psychological experience of embodiment" (Cash, 2004, p. 1), including feelings and thoughts about the body, and perceptions of appearance and the body's functions and capabilities (Cash & Pruzinsky, 2002). People are embodied beings, and their health and emotions are expressed through their bodies (Fox, 1997). For the purpose of this paper, we have used Merleau-Ponty's (1962) definition of embodiment as the phenomenal body that is not just a physical entity, but how the individual person experiences their body. Thus, the body acts as a medium to our lived experiences and perceptions of the body (Leder, 1990).

It is not surprising, that the way in which people perceive their bodies and its functions are important to psychological well-being (Fox, 1997). More specifically, people need to continuously adapt to body image changes as a result of maturation, experience and mood. Most research on body image has been conducted with adolescents or young adults (Tiggemann, 2004) because physical development is considered to cease after the teenage years. However, the body continually changes until death and consequently it is important to investigate how adults adjust psychologically to changes in body shape, appearance and functioning (Cash & Pruzinsky, 2002). Despite body image being a multi-dimensional construct, previous research on body image has tended to focus on perceived physical shape and appearance, largely to the exclusion of body image functioning (Hrabosky et al., 2009). Body image functioning refers to the perception and experience of bodily sensation (Johnston, Reilly, & Kremer, 2004). This might be a particularly important consideration when studying symptoms and ageing across life transitions

such as the menopause, where bodily changes can be perceived as stressful burdens to an individual's self-image.

Embedded within this potential burden on self-image is the influence of socio-cultural pressures on gender role expectation and a woman's embodiment, and how this is then translated into perceptions of the body and what it means to be a woman (Shilling, 2008). Raising feminist consciousness, authors, such as Bartky (1988) and Spitzack (1990) argued that a woman's body is always visible for judgment by others as a result of masculine constructions of femininity and internalizing their need for body control. This in turn, can increase body image problems and reduce psychological well-being, such as body objectification including body monitoring and shame (Fredrickson & Roberts, 1997).

Previous qualitative research investigating women's experiences of undergoing a hysterectomy, have tended to be discursive in nature and focus on decision making processes, cultural differences and social support (e.g., Galavotti & Richter, 2000; Lindberg & Nolan, 2001; Williams & Clark, 2000). Elson's (2005) qualitative research focused on a sociological perspective of gender identity with women who had undergone a hysterectomy, but highlighted the need to focus future exploration on the embodied experiences of appearance concerns and image management. Fong (2008) used Interpretative Phenomenological Analysis (IPA) to interview women with a high risk of ovarian cancer and examined their complex thoughts and feelings associated with the potential surgical removal of their healthy ovaries. Women expressed fears of the future unknown menopausal experience; the feeling of a separation of the self from the body, and the "transformation of their sense of health" and "personal agency" (p14). Research is now needed to understand how women make sense of the bodily changes as a

result of a surgical menopause, and how this in turn affects their thoughts, feelings and behaviours (Pearce, Thøgersen-Ntoumani, & Duda, under review-a). This information can provide guidance to health practitioners and help women make more informed choices in their healthcare decisions.

The main purpose of this study, therefore, was to explore the lived experiences of body image changes happening as a result of a surgical menopause in women who have undergone a hysterectomy with BSO. In this study we aimed to retrospectively capture meanings associated with the participants' journeys through their menopausal transitions. This began prior to the hysterectomy, at which point the participants had not experienced menopausal symptoms and were thus considered pre-menopausal, through to their post-menopausal experiences following the hysterectomy.

It is difficult to judge and contrast experiences compared to a 'norm' and to other conditions because of the subjective nature of pain and symptomatology (Bury, 2001). Therefore, we took an idiographic approach in seeking to explore the meanings the women associated with their experiences. We took the position that they, not the researchers, were the expert of their own experiences. An IPA approach was therefore adopted, because it prioritises the role of an individual's beliefs and the interaction with their embodied experiences (Dickson, Knussen, & Flowers, 2008).

Methodology

The use of an IPA approach (Larkin, Watts, & Clifton, 2006; Smith, 1996, 2004, 2008; Smith, Flowers, & Larkin, 2009) in this research provided the conceptual background and guided the

qualitative processes of this study. The major goal when using IPA is to elaborate a "rich and contextually grounded understanding of a phenomenon" (Darker, Larkin, & French, 2007, p. 2174) based on how people make sense of their experiences, and was therefore well suited to the aims of the study.

Prior to the main IPA study, a face-to-face focus group interview with five women experiencing the menopausal transition was carried out by me. The aim of this interview was to discuss the utility of potential feasible methods for this study. The idea of the menopause as a sensitive and personal taboo subject was a dominant issue. Several women in the focus group expressed that "some women experiencing the menopause" might not feel comfortable opening up to someone younger than themselves who has not experienced the transition. The women in the focus group discussed the potential biases and difficulties of collecting rich and honest accounts from future participants because I, as the first author carrying out the interviews, was a 27 year old woman. With this in mind, an innovative online interview method was employed using MSN (Microsoft Network) Messenger software (Pearce, Thøgersen-Ntoumani, & Duda, under review-b; Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2010; 2011).

A text-based Instant Messaging (text-IM) method was implemented because it complemented the aims of the research. This synchronous online method of interviewing provided a continuity of discussion not accomplished in alternative text-based interviewing tools, such as open-ended questionnaires, email and discussion boards. The text-IM was developed to encourage an extra level of anonymity between the researcher and the participant that cannot be achieved in face-to-face interviews (for further discussion on this see Jowett, Peel, & Shaw, 2011; Chapter 3 - Pearce, Thøgersen-Ntoumani, & Duda, under review-b).

Sample

We recruited seven women born between 1950 and 1962. The size of the sample and its homogeneity meet recommendations for IPA and emphasises its commitment to idiography (Hefferon & Gil-Rodriguez, 2011) on two grounds; (a) it allows an in-depth phenomenological inquiry and (b) it overcomes the potential risk of losing subtle meaning by using larger data sets (Reid, Flowers, & Larkin, 2005).[10]

Community advertisements (appendix 1) were distributed across England in places such as petrol stations, shops, educational institutes, theatres, public houses, and community and leisure centres. The only establishments where we were denied permission was in some large shopping mall toilets where people pay for advertising. We specifically targeted areas where we thought women experiencing the menopause may frequent, such as in a theatre in London that hosted a play about the menopausal transition. The posters had pull-off tags detailing my contact details. The most successful placing of the posters was in women's public toilets on the inside door of individual stalls. This was possibly because no one else saw the woman take a tag, thus increasing their confidentiality. To ensure adequate contextualisation (Smith, 2008), the recruited sample was screened on a purposive basis to ensure homogeneity. All included participants had undergone a surgical menopause (total hysterectomy with BSO) because of a medical condition and were pre-menopausal prior to the operation. All participants described themselves as white, living in the United Kingdom and having children (two also had grandchildren).

[10] We did not aim to achieve saturation, as this is a criterion appropriate to Grounded Theory (Glaser & Strauss, 1967), but does not fit with the idiographic philosophy of IPA (Shaw, 2011).

The participant's ages ranged from 36 to 54 years old at the time of the interview and ranged from six months to 19 years post-operation. All of the hysterectomies were for medical reasons, one case of endometrial cancer and the remaining six due to benign conditions, such as fibroids or endometriosis. Three participants reported having no menopausal symptoms after the surgery, two of whom had taken HRT since the operation, one had not. Out of the remaining four, two experienced menopausal symptoms straight after surgery, one experienced them six months after surgery and one a 'few years' after surgery. All of those latter four participants had undergone HRT straight after their hysterectomies but stopped taking it because of a variety of reasons: one after six months because of unpleasant symptoms and concerns of breast cancer, one after five years because of doctors' recommendations, one after seven years because of concerns of deep vein thrombosis, and one after eight years because of abnormally elevated oestrogen levels. The latter two participants were diagnosed with breast cancer one to three years after the cessation of HRT. They both believed their breast cancer was linked to HRT but this had not been medically confirmed.

Procedure

An information sheet (appendix 3) was provided to participants, along with the opportunity to discuss any queries with the researcher throughout all stages of the research process. Participants completed a consent form (appendix 4) before participating in the one-to-one online interview with me. Participant confidentiality and anonymity were ensured and the study was approved by the University of Birmingham ethics committee in the United Kingdom. Participants were informed of their right to withdraw from the study and that they did not have to answer any questions that made them feel uncomfortable. A new, dedicated research MSN

account was set up to avoid the need for participants to use their personal accounts. Participants were provided with a unique username and a login password to ensure anonymity and instructions on how to use MSN (appendix 5). Data were collected retrospectively and transcribed using MSN Messenger software (see figure 3.1 in previous chapter for picture of MSN interview example). Each participant is referred to using a pseudonym.

The interview schedule was semi-structured comprising open-ended questions focusing on the uniqueness of each woman's lived experiences from before to after the hysterectomy (appendix 6). Consistent with IPA, the interview schedule outlined the areas of interest but was not prescriptive, thus permitting iterative exploration of the topics that emerged. The interview started with broad general questions, such as "Please can you tell me about your experience of the hysterectomy?", "How do you feel about your health over this transition?" and "What would you recommend for women who might be in a similar situation in the future?" Prompts were used to explore emergent topics, such as "How did that make you feel?" and "How did you deal with that?" This allowed the participant to set the parameters of the topic so that the researcher did not impose their understanding of the phenomenon on the participant's narrative (Smith et al., 2009). Interviews lasted for between 90 minutes and two hours.

Analysis

An in-depth examination of each transcript was completed using IPA; for further information of the coding and thematic generation procedures (see Smith, 2003) . Two stages of interpretation (double hermeneutics) were adopted during the analysis process. The first was the appraised meaning provided by the participants and the second by the researchers applying their understanding of each participant's account (Smith, 2008). Thus, the findings are a

representation of both the participants' and researchers' communication and interpreted understanding throughout the interview process.

To improve trustworthiness, validity procedures were employed via a process of analytic audit and researcher triangulation (Smith, 2004). The texts and their emerging themes were reviewed by the four authors, each with varying levels of immersion in the study and all with backgrounds in Sport, Exercise and Health Psychology. Consistent with personal reflexivity all authors aimed to understand each participant's experience, avoid deductive judgments and reflect on their personal involvement and influence in the study (Nightingale & Cromby, 1999). I, as the first author, carried out the interviews, conducted the detailed coding and development of themes, and completed the interpretative process through the writing of the article. The other three authors, plus the University of Birmingham's sport and exercise psychology group, contributed to the development and structure of the themes and this article, drawing retrospectively on their informed positions of the research topic. All disagreements were discussed and resolved. This reflection aided the abstraction of themes and the final writing stage of the IPA.[11]

Findings

The aim, while using IPA, is to address both convergence and divergence within a group's experience, and therefore comparisons were made at an individual level (Smith et al., 2009). This rich data set yielded many striking stories covering aspects such as support and

[11] The philosophy of IPA is heavily rooted in Heidegger's (1962) idea that the interpretations of the participant and the researcher cannot be separated from the lived experience. These interpretations are therefore critical to the rich analysis in IPA. Therefore, the technique of bracketing was not used in this article as this is consistent with Husserl's (1962) contradicting phenomenological approach.

relationships; identity, gender, sex; and other large concurrent life changes (e.g., children leaving home, divorce or ill parent). However, bodily change was a prominent theme arising in all of the interviews and is an area lacking research and practical understanding; therefore we choose it as the focus of this article. The women's perceptions of their bodies over this transition seemed to shape the similarities and differences in their lived experiences.

The journey for the women in this article began with a deep internal feeling of bodily change, often from wellness to illness. In the first theme, we address this visceral sense of change to the body's feelings and functions. In the second theme, we discuss the meaning of the changing body to the women, and how they reflected on a changing body image. In the third and last theme, we examine the changes of the externally judged body. We discuss the use of the methods used to cope with the changes and threats to their body image and self-presentation.

The internal body

This theme arose because of the personal individual change each woman felt. The women often discussed the body as a material entity that was no longer functioning in the way that felt normal to them. Thus, they felt that they no longer lived in a well body. The women used phrases such as "I knew something was wrong" (Anne) and "I felt unwell. I knew I could not carry on with the way things were" (Helen). This started at the time of the gynaecological illness that led to the hysterectomy. The majority of women felt pain or an obvious physical symptom, such as heavy bleeding, which led them to seek medical advice. One exception to this was Rosie because she did not suffer pain as a result of her gynaecological illness. However, she had been visiting the hospital regularly for nine years with problems conceiving because of endometriosis and for medical screening purposes because her mother had died from ovarian cancer, and therefore felt

a great degree of threat from a potential surgical menopause. Fundamentally, all of the women's journeys over this transition began with an internal bodily change that indicated malfunctioning and ill-being.

Leder's (1990) philosophy of 'dysappearance' is defined as the appearance of a dysfunctional body into consciousness. This was not only reflected in the women's experience of symptoms, but the overall awareness of negative bodily change, which emanates from the gynaecological illness, the hysterectomy with BSO and the resulting menopause. The women's experiences of 'dysappearance' varied at this point depending on their menopausal symptoms and HRT choices. Jill and Lily were very good examples of the convergence and divergence within this theme. Both had exploratory surgery with the possibility of a hysterectomy and both woke up to be told they had not only had a total hysterectomy, but a BSO, and had therefore become menopausal.

The dysfunction of the physical body was viewed as something that the women did not have control over. However, the divergence between the women was apparent regarding their individual interpretation of this feeling and their perception of control over actions that could be taken in response. Lily requested a hysterectomy in the first place and perceived the additional need for the BSO as "justification for asking for the operation and confirmed that [she] hadn't been imagining things". Alternatively, Jill felt that the result of her exploratory surgery was a "shock to the system" where the "body is not adjusting a bit at a time", and therefore she was "hoping for a magic cure" for menopause.

Unlike Lily, Jill did not use language that showed she felt in control of her body and its functions. Jill wanted her body to feel "normal" again (in the sense of wellness, as opposed to a

social norm) and felt that she was waiting for someone else to explain what the "problem" was and how to make it "better". The need to feel in control of the body during this transition was an important consideration for all of the women. Betty ended her interview with this apt summary of her positive attitude and feelings of control: "of course being diagnosed with cancer, and still having to have check-ups is a bit tedious, but at the moment I feel fine, healthy, and well, so it is carpe diem and live in the moment, it reminds me of that old Frank Sinatra song - My Way". Stephen's (2001) qualitative study investigating the natural menopause found similar examples of visceral and experiential embodiment. However, in contrast to the gradual adjustment associated with a natural menopause, this highlights the "instant" (Jill) bodily change induced by the surgery. This bodily transition is not just based on simple trends of change, but of complexity differing on the individual's understanding, meaning and perceived control.

The meaning of bodily change

The hysterectomy symbolised the entering of a new stage of life, for example Lily stated "it just means you're going from one phase in your life to another". However, the changes in perceptions of body image did not follow a simple positive or negative experience but were drenched in complexity. Prior to surgery, the women expressed similar concerns about the function of their bodies. They felt they were constantly waiting for their bodies to "malfunction" and their lives were disrupted by hospital visits, or painful and embarrassing symptoms. "I felt at the mercy of my body" (Betty). This lived experience of the changing body impacted on the women's perceptions of their appearance and threatened their body image. After the surgery, all participants expressed relief from worry about "female bodily constraints" because none of the women now had to worry about a menstrual cycle or birth control. However, a noticeable

divergence in participants' body image after the surgery was apparent depending on whether or not they experienced menopausal symptoms and perceived these as a threat to their body image. Not only were there individual differences, but the women experienced daily fluctuations in body image states as well, for example Helen said "if I feel fat I feel rubbish. If I feel my body image is good then I feel good."

Helen expressed an improvement in most areas of her life, including body image, after the surgery. However, she experienced a "sad feeling with the finality of not being able to have another child". This embodied experience negatively changed Helen's perception of herself as a sexual being (Merleau-Ponty, 1962). This seemed to manifest itself in her body image, which impacted on her relationship with her husband. She said "all I had inside me was a black hole that made me feel strange" and she felt this stopped her from wanting to "make love". One of the most prominent explanations of meaning was from Helen who expressed that "all of your other bodily changes signify expectancy (puberty/pregnancy) whereas the menopause signals a closing down of purpose". Betty told the story of her friend who "would not feel like a woman if her periods stopped". She reflected on her friends experience saying "some women's sense of selfhood depends on this aspect, but not for me. I can be myself again because I am freer, and that in turn is liberating. I do not feel the same as I did before, I feel better". These rich interviews highlighted the important complexity of experience that is often missed in quantitative studies. Not all transitions are experienced as either negative or positive, but might be experienced as both depending on the meaning attributed to the (changing) body.

For the women who experienced the "female trials" of HRT and menopausal symptoms after surgery, a new set of threats encroached on the women's body image, such as increased

weight, changes in body shape, and feelings of embarrassment and ill-being because of hot flushes. Jill said "it makes me feel awful, depressed, fed up, frumpy - before I was really petit, skinny and energetic". These participants expressed feelings of distress because their pre-hysterectomy suffering had not been "solved" but merely changed.

This was particularly the case for Rosie who had not felt symptoms as a result of her gynaecological illness but did experience menopausal symptoms after her operation. She felt "unwell" and the principal concerns she discussed included feeling older and the negative perceptions of her body shape, breast size, and weight changes. "I gained about half a stone after the op[eration] and developed a big stomach, I think for my size. I do not like the look of it as I am small everywhere else. Everyone seems to think I am making a fuss, as I guess I am still on the small side compared to some." She expressed a conflict between her own negative perception of the bodily changes, and other peoples' more positive perceptions of her body. Even though she acknowledged others having a positive perception of her body, she was still concerned about how she would feel about displaying her body in front of others. "I feel disappointed. I hadn't expected to ever be concerned over my size". She also discussed how taking HRT to reduce her symptoms had increased her feelings of attractiveness through "bigger boobs" while coming off of HRT meant a loss of the breast size, which was a downfall. Rosie explained that because she had always perceived herself to be attractive, she felt that her self-worth was highly contingent on appearance. Therefore, bodily changes caused a high threat to her body image and increased her self-presentation concerns (Leary, 1995). Rosie's increased shame and monitoring of her bodily changes, with a focus on appearance to the exclusion of other activities suggests high levels of self-objectification (Fredrickson & Roberts, 1997).

The externally judged body

Through these interviews, it became clear that the bodily changes were not just internally felt. There were profound personal meanings associated with having a surgical menopause that were also manifested externally. These issues extended to how the women felt other people perceived them, how concerned they were by this, and how they coped with positive and negative changes to their body image.

Participants discussed coping with threats to their body image both before the hysterectomy as a result of their gynaecological illness and after the hysterectomy as a result of menopausal symptoms. Claire, for example, dealt with body image threats by "laughing it off" and "not dwelling on it". Additionally she sometimes used psychological avoidance (Cash, Santos, & Williams, 2005) or denial (Lazarus, 1993) to cope with body image threats, "it is almost as if I had decided that I was not going to acknowledge that this was happening to me". As a consequence, she did not confide in other people. In contrast, and notwithstanding that, Jill also said that she "just put up with it". She found it useful to "turn to others for support from partners, friends and other women with similar experiences". Jill expressed the importance of "knowing you are not the only one". All participants compared themselves to others to help them to put their experiences into perspective.

All of the women discussed their attempt to change their appearance to cope with the perceived threats to their body image. They reported "dressing down to hide in the crowd" (Anne), wearing clothes that displayed less of their bodies in public, using appetite suppressants or physical activity to control weight and appearance, or alternatively avoiding physical activity when such situations exacerbated their negative body image (e.g., embarrassing hot flushes or

heavy bleeding). Alternatively, the women who did not experience menopausal symptoms after the hysterectomy, either with or without HRT, expressed feelings of liberation and attractiveness. This was often because of the relief from having either a lack of symptoms or not experiencing body image threats. In addition, these women discussed the motivation to reinvest in their appearance. A prime example of this was Anne. When experiencing her gynaecological illness she "did not want people to look" at her. After the operation she felt "younger, with a sense of new life". "I seem to want to take better care of my skin. I have changed the way I wear make-up. I think it is because I feel reborn; different clothes."

Some participants, however, were more dependent on other people's opinions of their appearance, rather than how they felt in their own bodies, especially as they grew older. "I think someone complementing your appearance makes you feel positive. You tend to become less visible as you become mature!!" (Helen). This corroborates Fredrickson and Roberts' (1997) theory that a woman's body will become less sexually objectified as they become older and therefore relatively invisible. However, this exchange between the attention of being judged for the feeling of being invisible may explain why body dissatisfaction remains stable (Tiggemann, 2004).

The link between symptoms, energy levels and body image was also reflected in the motivation to re-engage in physical activity after the surgery. Helen and Betty both "resented" the gynaecological illness prior to the operation with specific reference to its disruption to their ability to exercise. Helen explained, "I have never liked being unfit - I felt like a fat lump and I resented not being able to spend so much time with my friends as I felt left out to a certain degree". Betty explained how "flooding" (heavy menstrual cycle) as a result of her

gynaecological illness stopped her from playing tennis. She was concerned about it happening while she was playing. She was happy that after the hysterectomy she was able to play tennis again. As soon as they had the operation these women felt energetic, wanted to take up exercise again and as a result felt more positive about their social lives and body image. Helen said, "as soon as I had the operation I felt free and could get on with life - back to my sports, playing with the children, not worrying about what I was wearing and for quite a while I felt amazingly energetic." This supports the discussion by Deeks and McCabe (2001) on the potential importance of symptoms and their impact on vitality levels, physical activity and health.

All of the women discussed trying to think and behave rationally and/or positively as a means of coping. This included improvements to the management of their health, and expressing the acceptance of this change. Some achieved this by focusing on a potentially better future, accepting that symptoms were beyond their control and/or comparing themselves with other women who were "worse off" to help themselves to feel better about their bodies. Taking a proactive approach to the management of symptoms seemed to help them to better understand their transition, body and how to cope adaptively. For example, Lily felt well informed about the changes her body faced and she recommended to other women experiencing gynaecological illness and/or menopause should deal with one symptom at a time and "find out what works for you". Some discussed reducing the importance of appearance as they got older. This process might partly explain Tiggemann's (2004) findings that body dissatisfaction seemed to remain stable throughout the lifespan. Most importantly perhaps, some women started to redefine their own criteria of physical attractiveness. Thus, weight became less important and factors such as not looking tired or run down became more pertinent.

Discussion

The experience of having a hysterectomy with BSO, and the menopause it inevitably induced, resulted in bodily changes in appearance and function that often influenced an individual's body image experiences, psychological wellbeing and health-related behaviour.

The emerging themes illustrate the similarities and heterogeneity in body image experiences of women who have experienced gynaecological illness and a surgical menopause. We have highlighted the journey of dysappearance: the experience from changes in deep visceral bodily feelings and functions (Leder, 1990); to what these bodily changes mean to the individual, for example in relation to female identity and ageing; to the externalisation and management of these body image improvements and threats.

In concordance with the findings of Deeks and McCabe (2001), some participants perceived negative changes to their body image. These participants often experienced low feelings of control over their bodies, yet they also felt it was important to self-present as attractive individuals. However, the opposite pattern was evident in other women who experienced a positive transition with fewer body image threats despite undergoing similar bodily changes. In fact, some women experienced a range of positive and negative body image changes simultaneously. These results highlight the importance of using a tailored approach in interventions designed to increase wellbeing in women who have had a hysterectomy with BSO.

Going beyond the descriptive trajectories of change, the different experiences appeared to be a result of not only intensity of gynaecological and menopausal symptoms, but also a result of subjective vitality and differences in appearance investment between individuals. This study is

the first examining the important impact that gynaecological and menopausal symptoms can have on vitality levels, body image, physical activity levels and wellbeing, which all appear inextricably linked. Further investigation is now needed to investigate symptoms over the menopausal transition and their link with vitality levels, to see if low vitality acts as a barrier to physical activity. Evidence has suggested that although exercise is not as effective as HRT, there is a weak trend that exercise may be more effective in reducing vasomotor symptoms compared to no intervention, and improves quality of life (Daley, et al., 2009: 2011). Therefore, this symptom-induced lack of energy is an important barrier to overcome and for health practitioners to consider.

Previous literature examining coping and the menopause, has mainly focused on methods women use to deal with symptoms, such as management of hot flushes and sleep disruption. There is a dearth of research on how individuals perceive and cope with threats to their body image with the extant literature only focusing on young adults (Cash et al., 2005). Three main dimensions emerged from the research of Cash, et al. (2005): avoidance, appearance fixing and positive rational acceptance. Avoidance (or denial; Lazarus, 1993) represents an individual's attempts to evade threats to thoughts and feelings about the body. Appearance fixing involves attempting to change appearance by concealing, camouflaging, or fixing a physical characteristic perceived as problematic. Positive rational acceptance, refers to strategies which focus on positive self-management, such as engaging in physical activity, rational self-talk and acceptance. While the first two dimensions represent more dysfunctional methods of coping, the third illustrates a more adaptive transformational strategy.

No previous research has specifically investigated coping with body image concerns in women who have experienced gynaecological illness, hysterectomy with BSO or menopause. This study's findings not only corroborate the dimensions of coping introduced by Cash et al. (2005) when investigating young adults (18-29 year olds), but they also add population-specific and contextual detail to the dimensions. This includes the change in importance placed on appearance and a reassessment of the criteria for attractiveness. This new information on adaptive coping methods for body image, symptoms and ageing can help inform and improve future applied practice and design of interventions.

The findings in this study also highlight the incompleteness of support, education and care available to the women experiencing this transition. Health practitioners can use the positive and successful experiences against the negative and distressful stories from this article to inform future practice. It seems that self-management[12] of gynaecological illness and a surgically-induced menopause provides an adaptive and empowering transition for these women. This included knowledge and acceptance of the condition and the body, maintaining or taking up healthy behaviours, peer support, and feeling autonomous over your life, body and condition. We recommend this patient-centred autonomy supportive approach be used in future healthcare to facilitate and support women to self-manage these bodily changes.

The findings support and add to the research examining body image in middle-aged adults (Tiggemann, 2004) and provide new information to researchers and practitioners regarding the lived experiences of women who have undergone a surgical menopause. This

[12] We refer to the holistic definition of self-management proposed by the Department of Health (2001) that focuses not just on medical management, but also on psychological, emotional, social and spiritual aspects of quality of life. "Developing the confidence and motivation of patients to use their own skills and knowledge to take effective control over their lives and not simply about educating or instructing patients about their condition" (p6).

includes women's perceived changes in body image threats, the methods they used to cope with them, and their reasons for using these methods. This experience of gynaecological illness, hysterectomy with BSO, and the menopausal transition was interpreted as negative, positive or a mixture of both simultaneously by the women in this study. It is important to understand more about the factors that influence these interpretations to improve a woman's quality of life during this period. In addition to examining the menopausal transition, it is important to assess changes in experiences related to other life transitions (e.g., pregnancy, general ageing) because the body image issues pertaining to such transitions are likely to be different.

The findings from this study are in concordance with previous research highlighting the generally negative consequences of the menopause in relation to health behaviours (Elavsky & McAuley, 2005). The current findings also emphasise the importance of changing symptoms resulting in changes to all body image dimensions, including both appearance and functioning, and consequent changes in health behaviours. This research accentuates the changeability of symptoms, body image, affect and behaviour. Future research could adopt diary methodologies (for example, Miklaucich, 1998) to explore the dynamics and interplay of menopausal symptoms and body image states with engagement in health behaviours.

Methodological reflections

The findings from this study highlight the importance of examining changes over prominent stages of life. However, a limitation to the design in this study is that data were retrospectively collected, thus relying on the recall of each participant regarding the entire transition. Although people are likely to remember the peak and troughs, the emotionally salient events might be skewed by memory (Dickson et al., 2008). Furthermore, due to the idiographic nature of this

research, these research findings are specific to this group of people and cannot be generalised to a wider population. We recommend that in the future, researchers use a longitudinal qualitative design to gather accounts over the course of the transition and explore how experiences change over time.

The majority of participants found the text-IM interview a convenient, flexible and encouraging environment. Unfortunately some women chose not to participate because of a lack of familiarity with technology or the absence of body language, tone of voice and facial expressions. Therefore, even though a purposive sample was chosen for this study, it should be acknowledged that participants also consisted of those that were comfortable participating in the online interviews. It is also important to acknowledge that by using a different communication method, a different type of relationship between the participant and researcher is created. Different communication methods might benefit different types of people and preference might depend on the subject and situation. This can be overcome in future by offering a range of interview methods to the participants. However, the text-IM interviewing tool alone might be the most suitable tool when exploring sensitive topics, when aiming to reduce researcher bias or when extra participant anonymity is appropriate (for a full evaluation of this method from the participants' and researchers' perspectives, see Pearce, Thøgersen-Ntoumani, & Duda, under review-b).

We felt it was important to ask the participants for their recommendations to women who will undergo a hysterectomy with BSO in the future. Reflection on their answers helped the researchers to make sense of the interviews and reach conclusions in relation to future recommendations for researchers and practitioners. However, we acknowledge that all

investigators in this study had a Sport, Exercise and Health Psychology background and the interpretations should be seen in this light. This limitation can be overcome in future collaborations using researchers with more diverse academic backgrounds.

The methods and findings we have adopted in this study strongly build on previous literature in multiple ways. It is the first study to: (a) use and reflect upon a text-based online interviewing method with women who have experienced a surgically-induced menopause (alongside chapter 3); (b) examine the important impact that gynaecological and menopausal symptoms can have on vitality levels, body image, physical activity levels and wellbeing; (c) build on previous literature on coping with the menopause. Previous literature focuses on methods to manage symptoms physically, such as wearing layers of clothes to cope with hot flushes. In this study, we uniquely examine coping with body image concerns; and (d) build on previous findings of coping with body image concerns by examining these issues with an underserved group of women, adding population-specific and contextual detail to the dimensions. This includes the change in importance placed on appearance and a reassessment of the criteria for attractiveness. This new information on adaptive coping methods for body image, symptoms and ageing can help inform and improve future applied practice and design of interventions.

Conclusion

The changing nature of body image experiences was evident in the women's accounts of the menopausal transition. The findings also suggested that the meaning of the body, perceived attractiveness, appearance investment and self-presentation concerns might affect adaptation to, and coping with, bodily changes. Methods that menopausal women use to cope with body image

threats were identified in this study, such as avoidance of presenting themselves in public when feeling ill or low, reassessment of their criteria of attractiveness, and self-management. These findings might have important implications for the wellbeing of menopausal women and can be used to inform future practice and interventions designed to enhance mental wellbeing and optimise health behaviours in this population.

CHAPTER 5

Menopause, Vitality, Body Image, Exercise and Wellbeing: A Mixed Methods Study.

Gemma Pearce, Cecilie Thøgersen-Ntoumani, Joan L. Duda and Nikos Ntoumains

Abstract

Objective: This study aimed to study the relationships between menopausal symptoms, appearance evaluation, exercise behaviour, subjective vitality, life satisfaction and self-esteem using a mixed methods approach.

Methods: A mixed method design was used. A nationwide survey was carried out with women who considered themselves to be experiencing the menopausal transition (*n*=271) to investigate the variables of interest quantitatively using Structural Equation Modeling. A selection of these participants (*n*=12) were then interviewed about their experiences of the menopause and put into the context of the developed model to provide potential explanations.

Results: Menopausal symptoms were significantly directly associated with appearance but not exercise. However, as hypothesised, when mediated by subjective vitality, menopausal symptoms were significantly related to both appearance and exercise. Exercise was associated with appearance but was not directly related to self-esteem or life satisfaction. However, there was an indirect effect as appearance was significantly associated with self-esteem and life satisfaction. The qualitative findings helped to corroborate the relationships in the model, provided insight into why the relationship between menopausal symptoms and exercise may have been non-significant, and provided information regarding other factors that may influence the model.

Conclusions: This cross-sectional model provides a base in which to continue mapping the relationships between these variables. Longitudinal research is the next step so that changes in menopausal symptoms potentially changing subjective vitality, appearance evaluation, exercise

behaviour, life satisfaction and self-esteem can be examined. It is clear that in addition to the variables examined in the model, perceived control, ability to cope, and motivations to exercise were considered important aspects by the interviewed participants and therefore we recommend that these be examined in future research to further develop this model.

Keywords: menopausal symptoms; appearance; vitality; exercise; life satisfaction, self-esteem

Introduction

From the beginning of the twentieth century, the menopause has been portrayed by the medical profession as a 'deficiency disease' when women become physically and mentally ill, and sexually unappealing (Lock, 1982). Women were led to believe that they could be 'cured' of the menopause and stay 'feminine forever' (Wilson, 1966). This biomedical perspective primarily implies that the menopause represents a negative change in women's lives largely due to bodily deviance from ideological norms, whereas the more recent feminist views argue that it can also be a neutral or positive experience (Dillaway, 2005). With the emergence of health psychology, biopsychosocial perspectives of health and illness have been proposed, taking concerns about appearance and bodily functions, attitudes towards health and perceptions of symptoms into account (Stephens, 2001).

The menopause usually occurs between the ages of 45 and 55 and refers to the cessation of a woman's menstruation and fertility as a result of reduced ovarian hormone secretion (NIH: National Institutes of Health State-of-the-Science Panel, 2005). The perimenopause is the period leading up to the menopause where the woman experiences changes to menstruation and includes the first 12 months following the final menstruation. After this point a woman is classed as postmenopausal as long as it is not caused by other reasons such as birth control pills (WHO, 1996). The climacteric, or menopausal transition, encompasses these stages and is the transition in a woman's life representing the reproductive to the non-reproductive phase where women can experience menopause-related symptoms (IMS, 1999).

Perceptions of menopausal symptoms

Symptoms, whether associated with a medical condition or a set of naturally occurring biological symptoms, are often accompanied by a fear of stigma and misunderstanding (Martin, Leary, & Rejeski, 2000). This can be exacerbated and cause further ill-being from sleep disruption, physical discomfort, social embarrassment and psychological symptoms, such as mood changes and anxiety disorders (Hunter & Mann, 2010; WHO, 1996). Women who report higher menopausal symptoms are associated with decreased health functioning (Kumari, Stafford, & Marmot, 2005). Whereas women who report low levels of symptoms feel a lower disruption to their embodied existence and therefore perceive feeling well (Mackey, 2007). A woman's perception of poor health due to menopausal symptoms reduces quality of life (Jafary, Farahbakhsh, Shafiabadi, & Delavar, 2011; Twiss et al., 2007). However, different individuals evaluate health status differently, and hormonal and mood changes during the menopausal transition may affect such evaluations (Short, 2003).

Women who perceive themselves to suffer from high levels of menopausal symptoms are more likely to perceive a lack of control over their health, and feelings of embarrassment and unattractiveness (Hunter & Mann, 2010). They are also more likely to perceive the menopause as a disease and seek help, compared to women who experience the same amount of symptoms yet do not perceive the symptoms as problematic (Hunter & Mann, 2010). Negative attitudes towards the menopause and perceptions of illness can act as barriers to health behaviour such as exercise participation, especially if a woman is worried about social evaluations of appearance, reductions in physical capabilities or feeling out of place in an exercise environment dominated by younger bodies (Martin et al., 2000). In this study, the aim was to build a model based on the

perceptions of women who were experiencing the menopausal transition, beginning with the examination of women's perceived menopausal symptoms.

Body image

Like puberty, the menopause is a biological milestone that highlights a new stage in a woman's life. However, unlike puberty, there is a relative paucity of research investigating the impact of this transition on women's lives and its relationship with body image (Pearce, Thøgersen-Ntoumani, & Duda, under review-a; Tiggemann, 2004). Body image refers not only to how a woman visually perceives her body, but also the way she thinks and feels about it. It is conceptualised as the attitudinal disposition of the physical self, incorporating evaluative, cognitive and behavioural components (Cash, 2000). Importantly, a person's psychological wellbeing, such as self-esteem, is strongly linked to the way in which they perceive their bodies and its functions (Fox, 1997). Bodily changes occurring as a result of menopausal symptoms can increase concerns about a woman's appearance and have a profound effect on her body image, such as changing towards a 'less feminine' body shape, an increase in weight, hot flushes and sweats, and signs of aging through changing skin and hair (WHO, 1996).

With the Western societal emphasis on appearance and the presentation of the self, body image concerns in menopausal women may be exacerbated, resulting in poor quality of life. Generally, these women perceive ageing to have a negative effect on appearance (Halliwell & Dittmar, 2003), with negative menopausal attitudes and high levels of appearance-related aging anxiety associated with higher levels of body surveillance and lower body esteem (McKinley & Lyon, 2008). A questionnaire-based study in Iran with 349 participants found that menopausal women who reported higher levels of body areas satisfaction, health evaluation, fitness

evaluation and self-efficacy, had higher perceptions of meaning and quality of life. Additionally, the menopausal women in the study reported their health status positively if they had better evaluations of appearance, experiencing a greater quality of life as an indirect result (Jafary et al., 2011). In addition, menopausal women are more likely to evaluate their appearance negatively and feel less physically fit, compared to women who are not yet menopausal (Deeks & McCabe, 2001). Interestingly, the importance of appearance tends to decrease as women age, keeping body satisfaction stable across the lifespan (Tiggemann, 2004), however women who reported higher levels of menopausal symptoms tend to report feeling less satisfied with their bodies (Bloch, 2002). The construct of appearance evaluation is important to research in this context, as it is related to quality of life, health evaluation (Jafary et al., 2011) and maladaptive health behaviour (Gingras, Fitzpatrick, & McCargar, 2004; Thøgersen-Ntoumani, Ntoumanis, Cumming, Bartholomew, & Pearce, 2011). Our model therefore examined the relationship between women's perceptions of their menopausal symptoms and evaluations of their appearance.

Exercise behaviour

Participation in exercise declines as people age and is particularly low in females over 50 years old (Stamatakis, Ekelund, & Wareham, 2007). This is concerning considering the documented psychological and physiological benefits of exercise for this population and the risks of inactivity (Department of Health, 2011; Lee et al., 2012; Netz, Wu, Becker, & Tenenbaum, 2005). Regular exercise can improve a premenopausal woman's attitude towards the menopausal body (Whittingham, 2000), bring about positive changes in body image during the perimenopause (Hausenblas & Fallon, 2006; Liechty, 2009) and reduce social physique anxiety in

postmenopausal women (Ransdell, Wells, Manore, Swan, & Corbin, 1998). Generally, weight loss and improvements to appearance are reported as a more important motivator to exercise in heterosexual women compared to other reasons, such as health and enjoyment (Grogan, Conner, & Smithson, 2006). Women who regularly exercise have a more positive evaluation of attractiveness, prefer a toned body to a thin body, and are more satisfied with their bodies, even when they are heavier, compared to non-exercisers (Furnham, Titman, & Sleeman, 1994). In addition, exercise has the potential to improve a person's perception of their body image by developing feelings of physical mastery, which in turn increases their self-esteem and wellbeing (Choi, 2000).

Women experiencing the menopausal transition are prime beneficiaries of the promotion of physical activity (Pratt, Macera, & Wang, 2000) as the majority are not only relatively inactive (Stamatakis et al., 2007), but physical activity can also help reduce stress (Cassidy, 2000) and may relieve symptoms associated with the menopause, such as hot flushes and night sweats (Daley, et al, 2009; 2011), fatigue (McAuley, White, Rogers, Motl, & Courneya, 2010), depressive symptoms (Dennerstein & Soares, 2008; Rimer et al., 2012) and incontinence (Brown & Miller, 2001). Physical activity can also help to reduce the risk of cardiovascular disease (Carels, Darby, Cacciapaglia, & Douglass, 2004) and post-menopausal breast cancer providing she does not have a large amount of visceral fat (Carpenter, Ross, Paganini-Hill, & Bernstein, 1999, 2003; Chan et al., 2007). Menopausal women who exercise are more likely to have a lower body mass index and higher health-related quality of life as a result (Daley et al., 2007). In addition, studies have found that sleep quality can be improved by exercise (Ohayon & Vecchierini, 2005; Youngstedt & Freelove-Charton, 2005), and that sleep difficulties and vasomotor symptoms are less likely in physically active women (Youngstedt & Freelove-

Charton, 2005). This in turn can enhance wellbeing (Diehl & Choi, 2008; Elavsky & McAuley, 2005; Williams, Levine, Kalilani, Lewis, & Clark, 2009). Jeng, Yang, Chang, and Tsao (2004) found that women who changed from sedentary to exercise adheres (for at least 6 months) because of the menopause perceived that their bodies and minds were powerful and focused on health-based motivation and regaining their lives. However this was only after overcoming the initial barriers to exercise.

An alternative view to exercise and the menopause, is that menopausal symptoms, such as depressive symptoms (Craft, Perna, Freund, & Culpepper, 2008), incontinence (Brown & Miller, 2001) and fatigue/lack of vitality (McAuley et al., 2010), might act as barriers to exercise. The most salient barriers reported to prevent adults participating in exercise are old age, low physical health, feelings of illness/ill-being and concerns of self presentation due to declining physical abilities and bodily changes (Seefeldt, Malina, & Clark, 2002). Symptoms of illness and ageing affect adherence to activity and are more likely to cause sedentary behaviour in older compared to younger adults (Schutzer & Graves, 2004). This implies that the menopausal symptoms act as barriers to their own relief thereby creating a vicious cycle. If a woman feels too low in energy to participate in exercise even though it may be beneficial to her and help to relieve her symptoms, this may have deleterious consequences. Not only is she at increased risk from inactivity but may experience a higher amount of symptoms, reduced body image and lower levels of wellbeing. The most successful promotion of physical activity tackles barriers associated with physical activity uptake and adherence (Seefeldt et al., 2002), but a further understanding of the intricacies to this problem is needed in women experiencing the menopause. Our model, therefore, examined the relationship between perceptions of menopausal symptoms, exercise participation, and evaluations of appearance.

Feelings of vitality

The findings from preceding qualitative research (Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2013) with women who had experienced a surgical menopause indicated that women reporting lower levels of vitality due to menopausal symptoms, felt older, less attractive (e.g. frumpy and saggy tired eyes) and had lower levels of energy, which affected decisions to exercise. This was in comparison to both when those same women felt that they had less menopausal symptoms, and to women who did not report menopausal symptoms or lower vitality levels as a result. Many menopausal women experience sleep disturbance (Ford, Sowers, Crutchfield, Wilson, & Jannausch, 2005; Kravitz et al., 2003), due to fluctuating hormone levels and night sweats, which in turn leads to women feeling listless and less energetic (Deeks & McCabe, 2001). Lack of sleep causes fatigue/low vitality, irritability, lack of concentration, lower work productivity, lower health status and reduced quality of life (Landis & Moe, 2004; Oldenhave, Jaszmann, Haspels, & Everaerd, 1993). This is likely to deplete a woman's physical and psychological resources and therefore also her inclination to exercise, however this idea remains to be empirically examined with women experiencing a natural menopausal transition (Deeks & McCabe, 2001).

Although the above findings were corroborated in our previous qualitative study (Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2013), this was not always the case. Some women viewed the menopausal transition as liberating and did not feel negatively affected by the symptoms. They reported the enjoyment of their 'new lease of life', feeling more attractive and having more energy to participate in exercise. As subjective vitality is important to maintain and enhance for general health and motivation in life (Ryan & Deci, 2008), it was examined in the

current mixed methods study with women who had experienced a natural menopause, in order to encapsulate what the women who had experienced a surgical menopause previously talked about qualitatively. The concept of subjective vitality is defined as the subjective experience of feeling alert, energetic and alive, and generally having energy available to the self (Bostic, Rubio, & Hood, 2000; Ryan & Frederick, 1997). It was therefore predicted that this variable can partly explain the relationship between menopausal symptoms, perceived attractiveness and exercise behaviour.

Wellbeing

Eudaimonic wellbeing focuses on the quality of lived experiences that is intrinsically worthwhile to human beings (Ryan, Huta, & Deci, 2008; Waterman, 1993). Life satisfaction and self-esteem are two more common forms of eudaimonic wellbeing examined in relation to menopause, exercise and body image. Overall, research has discussed the associations between menopausal symptoms and exercise (Daley, et al., 2009; 2011), menopausal symptoms, health and life satisfaction (Dennerstein, Dudley, Guthrie, & Barrett-Connor, 2000; Dennerstein, Dudley, & Guthrie, 2003; Dennerstein, Lehert, Guthrie, & Burger, 2007), exercise and body image (Campbell & Hausenblas, 2009; Hausenblas, Brewer & Raalte, 2004; Hausenblas & Fallon, 2006), and body image and wellbeing (Cash, 2004; Fox, 1997). Menopausal symptoms can have deleterious effects on body image and wellbeing (Deeks & McGabe, 2001; Pearce, Thøgersen-Ntoumani, & Duda, under review-a) but menopausal women who exercise regularly have higher levels of wellbeing, specifically life satisfaction and self-esteem (Darling, Coccia, & Senatore, 2012; Elavsky & McAuley, 2005, 2007a, 2007b). Therefore satisfaction with life and levels of self-esteem represented the wellbeing outcomes in our model.

Although relationships between these variables have been investigated separately, there is a lack of empirical research examining the interrelationships among these variables in women experiencing the natural menopause. The findings could have implications for health promotion among this group.

A mixed methods approach

The emerging relationships from previous exploratory research between the concepts discussed above helped to provide a potential explanation of how all the pieces of this puzzle may fit together. This study aimed to explore this explanation using a mixed methods approach using both quantitative and qualitative data collection and analyses. Questionnaire and interview methods are increasingly combined in psychology to complement each other and examine both the outcome and processes associated with a research problem (Thøgersen-Ntoumani, Fox, & Ntoumanis, 2005). Firstly, a dominant questionnaire stage was implemented to examine the relationships emerging in the literature quantitatively. This was followed by an interview stage with a small sample of the women who had completed the questionnaire to elaborate how these variables fit together through examples of real life experiences. Figure 5.1 represents our approach in this mixed methods study, which placed an emphasis on the quantitative aspect (Plano Clark & Creswell, 2008) while using the qualitative part to inform the potential causal explanations of the model (Maxwell, 2004).

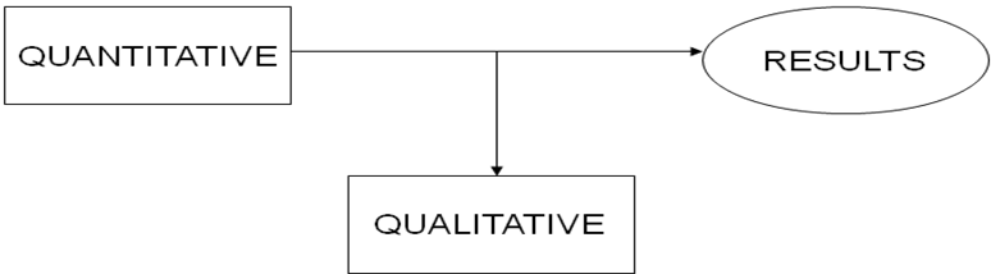

Figure 5.1: Qualitative methods used to help explain quantitative findings (Plano Clark & Creswell, 2008, p167).

The following statements summarise the hypothesised relationships between the variables in the quantitative stage of this study: menopausal symptoms, appearance evaluation, exercise behaviour, subjective vitality, life satisfaction and self-esteem.

1. Menopausal symptoms will be negatively associated with subjective vitality, appearance evaluation and exercise behaviour.

2. Subjective vitality will be positively related with appearance evaluation and exercise behaviour.

3. Appearance evaluation and exercise behaviour will be positively associated with life satisfaction and self-esteem.

4. An indirect relationship will exist between menopausal symptoms, appearance evaluation and exercise behaviour via subjective vitality. In addition, apart from direct relationships, an indirect association between exercise and life satisfaction plus self-esteem through appearance evaluation was predicted.

The qualitative part of the study aimed to explore in more depth the nature of the relationships in the model by asking women about their experiences of menopausal symptoms, appearance, and health over their menopausal transition.

Method

Participants

In the first stage, women experiencing the natural menopausal transition (*n*=271) were recruited from across the UK. Respondents were asked to complete a questionnaire if they were experiencing menopausal symptoms, even if they were postmenopausal or the only symptom was the cessation of their menstruation. The stages of the menopause were described to participants in adherence to the aforementioned WHO (1996) and IMS (1999) definitions as part of the information sheet. Participants who had experienced a surgically or medically enhanced menopause were excluded. The mean age of the participants was 53 years old (SD = 4 years) with a range of 38-66 years old. There was an overrepresentation of white (97%) and heterosexual (96%) women. The majority were married or in a long term relationship (79%) and employed full or part time (94%). Most women had children (75%) and some had grandchildren (15%). The average Body Mass Index was 26.52 (SD = 4.85), which is classified as overweight. The majority of participants reported that they tended to participate in fairly healthy behaviours: 90% said they were non-smokers, 63% reported drinking less than ten units of alcohol per week and 17% reported not consuming any alcohol at all.

A wider age range of menopause was reported in comparison to the average reported menopausal age range (45-55 years old) stated by Williams et al. (2009). This is because all

women experiencing natural menopausal symptoms were invited to participate in the study, and symptoms can be prevalent into the early postmenopausal stage. About two thirds of the women (63%) reported their menopausal status as perimenopausal, with the remaining 37% experiencing postmenopause (of which 28% <2years, 27% 2-3 years, 31% 4-5 years, 11% >6 years, and 3% unknown). This compares to the typical four years of symptoms postmenopause according to NIH State-of-the-Science Panel (2005). A minority of the women (8.5%) were using Hormone Replacement Therapy (HRT), nine of whom had been using it for less than a year, 13 between '1-4 years' and only one had been using it for 11 years. Similarly only 12% previously took HRT but do not anymore. Of those participants, six had used it for less than one year, eight for '1-4 years', six for '5-9 years' and seven for 'more than 10 years'. Their reasons for HRT cessation revolved around side effects, concerns of health risks or as a result of their doctor's advice. In comparison to McLaren, Hardy, and Kuh (2003) study, who found that 19% of their sample took HRT, the figure in this present study is half the amount. This decrease may reflect increased caution of HRT prescription due to the findings by the Women's Health Initiative (Rossouw et al., 2002) regarding the increased health risks from taking HRT.

At the end of the questionnaire, the women indicated whether they were happy to participate in the interview stage of the study. Of the women who wished to take part, a purposive sample was invited for interview capturing a range of experiences (n=12) with differing levels of the variables investigated in the questionnaire. All of the interview participants described themselves as white, living in the UK and having children.

Procedure

As a pilot, a focus group interview was carried out with a small sample of women experiencing the natural menopause (*n*=5). Before attending the interview, all of the women completed the questionnaire, and were asked questions during the focus group as 'experts' of the menopausal experience to discuss their feedback of the questionnaire and recruitment advertisements. Based on the outcomes from the pilot, small modifications of the questionnaire and advertisements layout were made to ensure it was more user-friendly in the main study. The pilot was very useful for recruitment strategies and where best to place advertisements.

Participants were recruited through poster and email advertisements (appendix 1) in educational establishments, leisure centres, local clubs, churches, tourist venues and motorway service stations. Newsletter and website advertisements were placed in the National Federation of Women's Institutes (NFWI), Menopause Matters, The Menopause Exchange, National Osteoporosis Society, as well as University and free local newspapers. A personalised Facebook group (http://www.facebook.com/group.php?gid=62976588007) and website (http://sites.google.com/site/menopausegroup) advertised the study and provided further information of networks for support and advice. The most successful recruitment was from posters placed on the back of individual toilet doors with removable tags containing the direct survey link and the research team's contact details.

Written informed consent was gained and the questionnaire (appendix 7) was available to complete in hard copy and sent back using a freepost address, on Microsoft Word and sent back electronically, or online using SurveyMonkey software (www.surveymonkey.com). Participants were asked to provide an ID code, which would be used to store their data anonymously devised

using their place and year of birth, and number of siblings and children (e.g., hallgreen195200). The online questionnaire was set up so participants answered all of the questions to limit the amount of missing data. They were provided with a prize draw incentive for participating in the questionnaire with three retail gift vouchers as prizes.

Participants were then purposefully chosen covering a range of high and low scores for each of the variables investigated in the questionnaire. Those agreeing to participate in the interview stage (n=12) completed an additional consent form (appendix 4) and received an information sheet specific to the interview study (appendix 3). Participants took part in a synchronous text-based online one-to-one interview with me using their ID codes and were given a pseudonym for the written report. The data were collected retrospectively and transcribed using MSN Messenger software (see Pearce, Thøgersen-Ntoumani, & Duda, under review-b; Pearce, Thøgersen-Ntoumani, Duda, & McKenna, 2010; 2011). Interviews continued until saturation of themes was reached. All variables were split into tertiles to describe high, moderate and low levels of each variable, except exercise behaviour, which is described as exerciser or non-exerciser (an exerciser was determined by someone who said yes to taking part in at least one form of structured sport or exercise based on the habitual physical activity questionnaire).

Throughout the study, participant confidentiality and anonymity were ensured and the research was approved by the University of Birmingham ethics committee in the UK. Participants could discuss any queries with the researchers throughout all stages of the research process and were informed of their right to withdraw from the study. Participants received follow up emails/letters afterwards thanking them for completing the study and a report of the study

findings. The quantitative and qualitative findings were integrated together to provide a discussion informed by a mixed methods approach.

Measures

The questionnaire assessed a range of demographic details and personal level predictors using closed questions, the results of which are reported in the preceding sample description.

Menopausal symptoms. Menopausal status was determined by asking participants a series of questions related to their menstrual bleeding patterns (Hunter & Liao, 1995). They were asked if they are current users of or have previously used Hormone Replacement Therapy. Psychological health, health related quality of life and menopausal symptomatology were assessed using the Women's Health Questionnaire (WHQ: Hunter, 1992). This is a subjective 36-item scale designed to assess nine factors of middle-aged women's perceptions of emotional and physical health. However four factors relating to appearance evaluation and psychological wellbeing were omitted in order to limit covariance with the similar other measures in the overall questionnaire, and the sexual dysfunction factor was removed due to a low internal variability ($\alpha = 0.4$). Therefore, only the four factors measuring physical menopausal symptoms (somatic symptoms, vasomotor symptoms, sleep problems, and menstrual symptoms) were used in the analysis. The higher the score, the more physical menopausal symptoms the respondents were experiencing. This questionnaire has high internal and test-retest reliability (Hunter, 1992; Hunter, Coventry, Mendes, & Grunfeld, 2009). Internal consistency for this study was measured using Chronbach's alpha coefficient ($\alpha = 0.80$).

Subjective vitality. The state version of the Scale of Subjective Vitality was measured (Ryan & Frederick, 1997), using the 6-item version proposed by Bostic et al. (2000) for higher construct validity. The higher the score, the more vital the participant felt. A high internal reliability was found for subjective vitality in the present study ($\alpha = 0.93$).

Exercise behaviour. The exercise domain of Baecke, Burema, and Frijters (1982) habitual physical activity questionnaire was used. As activity at work, commuting or active leisure, such as gardening, were not relevant to this study, only the single exercise domain of the questionnaire was used to measure self-reported levels of structured sport and exercise behaviour. The use of this single exercise domain compared to all three physical activity domains in the full version of the questionnaire have shown similar path coefficients and fit indices in previous Structural Equation Models (SEM: Thøgersen-Ntoumani et al., 2005).

Respondents could record up to three different exercise activities, specifying the activity type, the average duration of each session and the frequency they participated in an average week. This was then transformed into a standardised Metabolic Equivalent of Task (MET) of intensity, frequency and duration (MET hours per week; e.g., Sternfeld, Quesenberry Jr, & Husson, 1999; Thøgersen-Ntoumani et al., 2005). Firstly, MET values were assigned to each reported type of exercise based on Ainsworth et al.'s (2000) guidelines with one MET representing the oxygen consumption required at rest (approx 1kcal/kg/h). The MET value was then multiplied by the reported duration and frequency. As participants could record up to three different types of exercise, a METhr/wk value was calculated and then these were summed up to devise the total METhr/wk score. Construct validity and test-retest reliability was found to be adequate (Baecke et al., 1982). Chronbach's alpha coefficient was 0.80 in the present study.

Appearance Evaluation. The body image measure used was the five-item appearance evaluation subscale from Cash's (2000) Multidimensional Body-Self Relations Questionnaire (MBSRQ-AS). Two of the items were reversed for scoring so the higher the score, the more positively participants' viewed their appearance. Support has been shown for the validity (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999) and reliability (Cafri et al., 2006) of this measure. The present study found high internal consistency for this scale ($\alpha = 0.88$).

Life Satisfaction. The Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) assesses satisfaction with people's lives as a whole. It consists of five positively worded statements that are rated on a seven-point scale ranging from 'strongly disagree' to 'strongly agree' with higher scores representing higher satisfaction with life. The scale has demonstrated good reliability and validity (Pavot & Diener, 1993), with high internal consistency for the present study ($\alpha = 0.92$).

Self-Esteem. The ten-item self-report Self-Esteem Scale (Rosenberg, 1965) consists of ten statements related to overall feelings of self-worth or self-acceptance. The items are answered on a four-point scale ranging from 'strongly agree' to 'strongly disagree'. Five of the items were reversed for scoring so that higher scores indicate higher levels of self-esteem. The scale has demonstrated good reliability and validity (Rosenberg, 1965). The present study found high internal consistency for this scale ($\alpha = 0.90$).

Interviews. Online semi-structured interviews were conducted via a synchronous online text-based Instant Messenger software (Pearce, Thøgersen-Ntoumani, et al., under review-b; Pearce et al., 2010, 2011). Participants were provided with instructions of how to log on using a unique login username and password. An account was set up especially for this research study so

that they did not need to use a personal account. They were asked to confirm their individual ID code (created by them on completion of the questionnaire) at the start of the interview to ensure that the questionnaire and interview data were matched correctly. The interview method and schedule was piloted and refined prior to the study. It comprised of open-ended questions relating to the participants experiences of the menopausal transition and quality of life. The interview topic started off with broad general questions asking the participant to tell the researcher about their menopausal experience. The schedule (Appendix 6) then outlined topics for discussion, such as any appearance, health behaviour or wellbeing changes over the menopausal transition and how they relate to each other. Prompts such as 'Can you tell me more about that?' or 'How did you deal with/feel about that?' permitted an iterative approach to emerging topics during the interview. Interviews lasted between 90 minutes and 2 hours.

Analysis

The initial descriptive statistics and mediation analyses were carried out using the SPSS software (PASW 18) to examine the hypothesised links between menopausal symptoms, subjective vitality, exercise behaviour and appearance evaluation. The listwise deletion method was used to remove missing data, which resulted in the remaining 271 participants included in this study. Interrelationships between the variables in the hypothesised structural equation model (figure 5.2) were tested through SEM software (EQS 6.1). Variables in the model that are directly linked by an arrow are considered to have a direct effect, whereas those linked by a mediating variable are considered to be an indirect effect. A model fit was examined using the Satorra-Bentler scaled chi square (χ^2) statistic (S-B χ2:Satorra & Bentler, 1994; Satorra & Bentler, 2001) and evaluated based on Hu & Bentler's (1999) findings. They determined that a good model fit is

achieved when the Comparative Fit Index (CFI) and the Non-Normed Fit Index (NNFI) are close to or above 0.95; the Standardised Square Root Mean Residual (SRMR) is close to or below 0.08; and the Root Mean Square Error of Approximation (RMSEA) is close to or below 0.06 with the lower bound of the 90% Confidence Interval (CI) of the RMSEA including the value of 0.05 (see Hair, Black, Babin, & Anderson, 2010 for more details). Lagrange and Wald post hoc tests were examined to create the final model with the best fit.

Each interview transcript was examined in-depth and coded to generate themes associated with how the women experienced and approached their menopausal symptoms, body image, health and wellbeing. The equivalent quantitative validity procedures to qualitative research are trustworthiness, credibility, dependability and confirmability, such as researcher triangulation and member checking, were considered throughout (Creswell & Miller, 2000; Denzin & Lincoln, 2000). I, as the first author carried out the interviews. The texts and their emerging themes were then reviewed independently by the three authors, all with backgrounds in Sport, Exercise and Health Psychology. Consistent with personal reflexivity all authors aimed to understand each participant's experience, avoid deductive judgements and reflect on their personal involvement and influence in the study (Nightingale & Cromby, 1999). All disagreements were highlighted, discussing potential reasons and assumptions that may have led to the different conclusions. This aided reflection during the abstraction of the themes enabling their development and revision. All authors then retrospectively evaluated the themes of experience against the interview transcripts, and compared this with the findings from the model. Commonalities and differences between interview participants in relation to the model are discussed in this paper.

Participants were emailed their interview transcripts to check for accuracy after the interview and then sent a report of the summarised findings of the study and asked to provide feedback. These member checking procedures facilitate collaboration between the participant and researcher during the research process, aiding the participants' understanding of their individual and representative contributions (Creswell & Miller, 2000; Lincoln & Guba, 1985).

Results

Descriptive statistics from questionnaire

The means, standard deviations and correlations of menopausal symptoms, subjective vitality, appearance evaluation, exercise behaviour, life satisfaction and self-esteem are provided in table 5.1. Additionally, when menopausal symptoms were broken down into the four factors (somatic, vasomotor, menstrual and sleep problems), sleep problems had the highest negative correlation with subjective vitality ($r = -0.30$, $p < 0.01$).

Table 5.1: Means, Standard Deviations and correlations of the variables.

Variable	Mean	SD	1	2	3	4	5	6
1. Menopausal Symptoms	2.59	0.51	-	-	-	-	-	-
2. Subjective Vitality	3.52	1.41	-0.27**	-	-	-	-	-
3. Appearance Evaluation	3.00	0.82	-0.32**	0.48**	-	-	-	-
4. Exercise Behaviour	19.75	24.34	-0.18**	0.21**	0.22**	-	-	-
5. Life Satisfaction	4.74	1.41	-0.24**	0.57**	0.43**	0.20**	-	-
6. Self-Esteem	3.00	0.54	-0.23**	0.55**	0.50**	0.15*	0.61**	-

** $p < 0.01$

* $p < 0.05$

Robust statistics were produced as recommended for samples of 200 - 500 cases (West, Finch, & Curran, 1995).

Relationships in SEM

A cross-sectional SEM (see Figure 5.2) was hypothesised to examine whether menopausal symptoms were related to subjective vitality (directly), exercise behaviour and appearance evaluation (directly and indirectly via subjective vitality), using maximum likelihood estimation. Life satisfaction and self-esteem were also hypothesised to be directly associated with appearance evaluation and exercise behaviour as an indirect result of menopausal symptoms and subjective vitality. Exercise was an observed, single-item variable. All the other variables were measured with indicator items, but represented in the SEM as their latent factors. The indicator items were parcelled so there were less parameters being estimated, therefore increasing the parsimony of the model (Hau & Marsh, 2004).

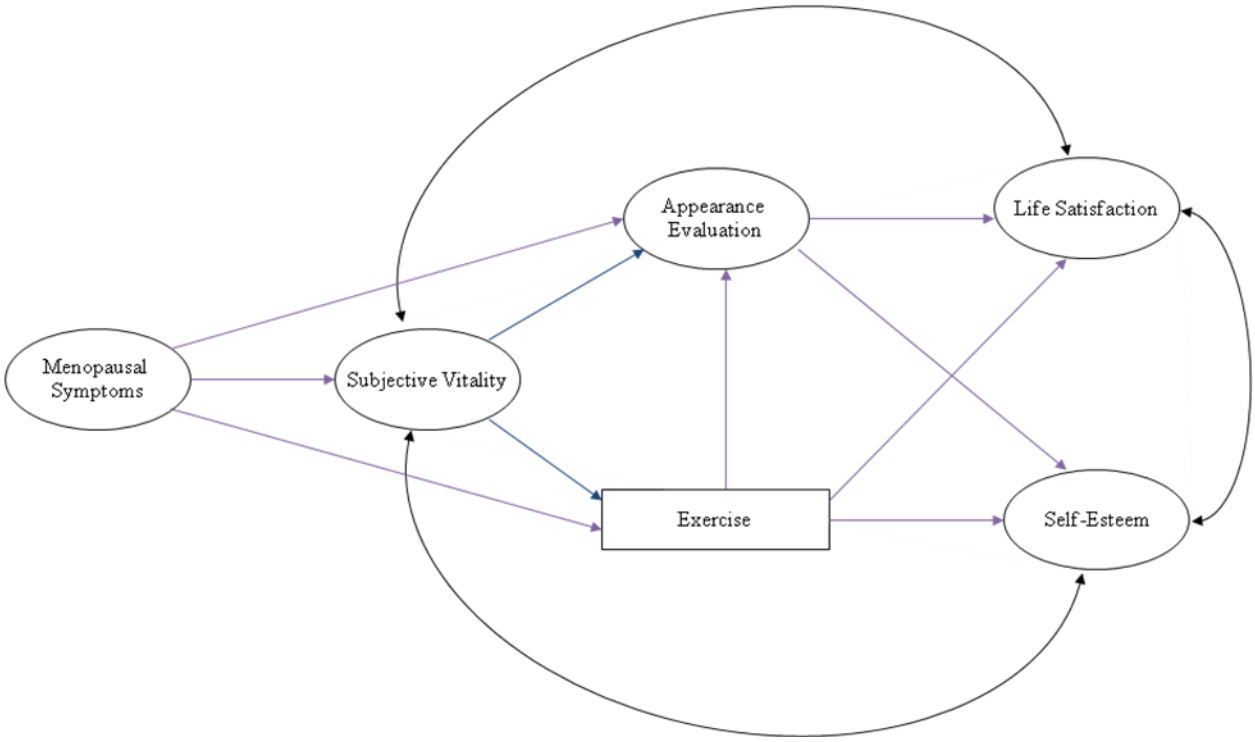

Figure 5.2: Hypothesised structural model.

The structural model in figure 5.2 had a good fit (robust statistics reported): $\chi^2_{(158)} = 309.56$ ($p < 0.001$); NNFI = 0.94; CFI = 0.95; SRMR = 0.07; RMSEA = 0.06 (0.05-0.07). All but three of the relationships were significant. Menopausal symptoms were not significantly related to exercise; and exercise was not significantly related to life satisfaction or self-esteem in this model. Wald and Lagrange multiplier post-hoc statistics suggested the model would improve if those three non-significant links were removed, which led to the revised model (see figure 5.3).

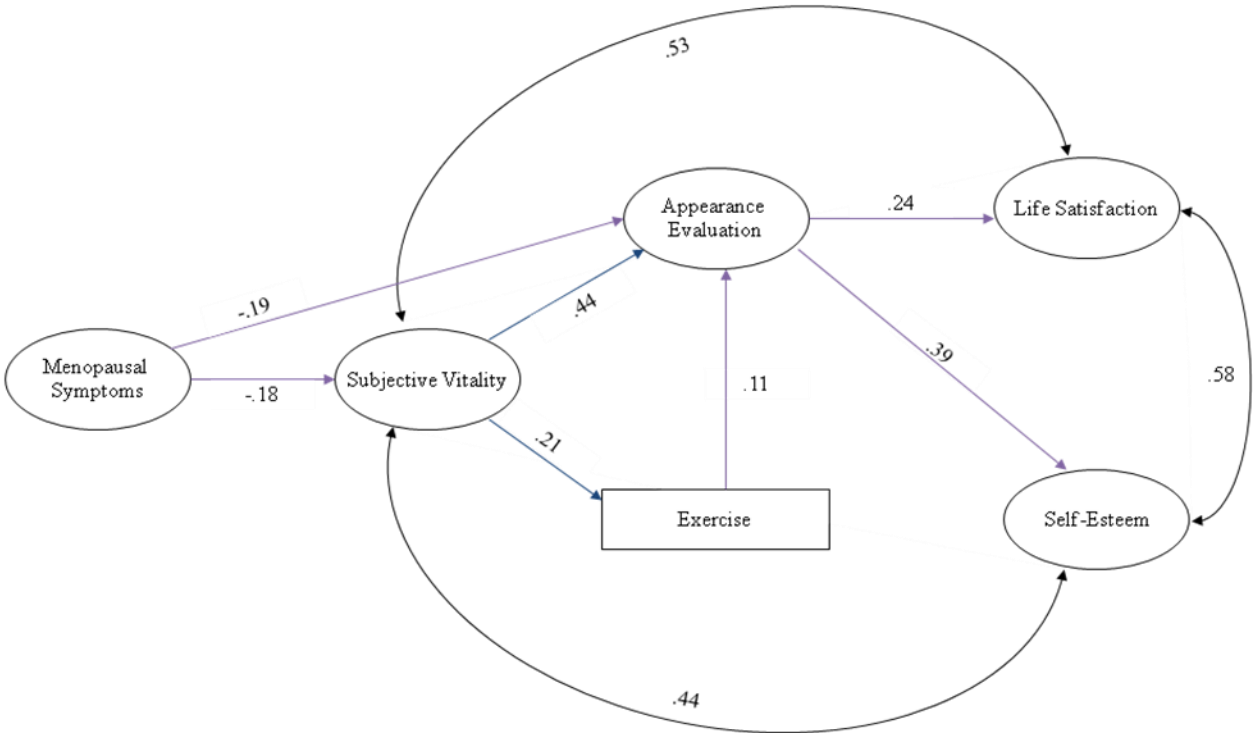

Figure 5.3: Revised structural model: $\chi 2$ (161) = 315.16 (p < 0.001); NNFI = 0.94; CFI = 0.95; SRMR = 0.08; RMSEA = 0.06 (0.05 - 0.07).

This revised model (figure 5.3) had a similarly good fit to the hypothesised version (robust statistics reported): $\chi^2_{(161)} = 315.16$ ($p < 0.001$); NNFI = 0.94; CFI = 0.95; SRMR = 0.08; RMSEA = 0.06 (0.05 - 0.07). All parameters in this model were significant. In relation to the first three hypotheses relating to the direct relationships in the model, there was support for menopausal symptoms being significantly negatively associated with subjective vitality (β = -.18) and appearance evaluation (β = -.19), but not for exercise behaviour (not in revised model). As hypothesised subjective vitality was significantly positively related to appearance evaluation (β = .44) and exercise behaviour (β = .21). Appearance evaluation was significantly positively associated with life satisfaction (β = .24) and self-esteem (β = .39) as hypothesised, however exercise behaviour was not (not in revised model). With regards to the final hypothesis, there

was a significant indirect path between menopausal symptoms and appearance evaluation through subjective vitality, and between subjective vitality and the two wellbeing variables (life satisfaction and self-esteem) through appearance evaluation. However, there was not a significant indirect path between menopausal symptoms and exercise behaviour through subjective vitality, or subjective vitality and the two wellbeing variables through exercise behaviour. There was also a significant indirect path from menopausal symptoms to subjective vitality, to exercise behaviour, to appearance evaluation and then to both life satisfaction and self-esteem.

Interviews

Five graphical profiles have been drawn to provide a representation of where the 12 interviewees fit in relation to the model (see figures 5.4 - 5.7). Four of the women (Jan, Nina, Pam and Roz) reported low amounts of symptoms, high levels of subjective vitality and appearance evaluation (see figure 5.4). Jan exercised and reported high levels of life satisfaction and self-esteem. However, Nina, Pam and Roz reported that they did not participate in structured exercise and all reported moderate levels of life satisfaction and self-esteem.

Jan was concerned with the 'journey into the unknown', 'I'm expecting it to get worse before it gets better, but like all other life changes, you get used to it'. She was concerned about bodily changes, such as weight gain, which she had never had to deal with before. She clarified that her concern was more frustration rather than feeling miserable as she felt that 'no matter what I do it does not help'. She has suffered as a result of menopausal symptoms, with 'hot flushes, feeling blue, needing calcium for bones and a hip operation, and a lack of energy'. Her symptoms often make her feel lethargic, embarrassed and uncomfortable, making her 'more

quiet and withdrawn' than she considers herself to be usually. Jan feels that as her symptoms come 'in waves', she feels that she can have a more positive attitude towards her life when her symptoms are at low levels. Her feeling of a lack of control over her symptoms meant that she 'just got on and dealt with it'. She has now become proactive in improving her health and fitness and feels that exercise makes her feel better, maintains her looks and reduces her symptoms. She said she had thought about taking make-up lessons to try and 'camouflage' her face more in the fight against ageing and joked that she needed a 'better brand of polyfilla'. Jan wished to 'enjoy life to the full' after the menopause, but struggled with the contradiction of the negatively associated ageing body against the potential benefits of her future.

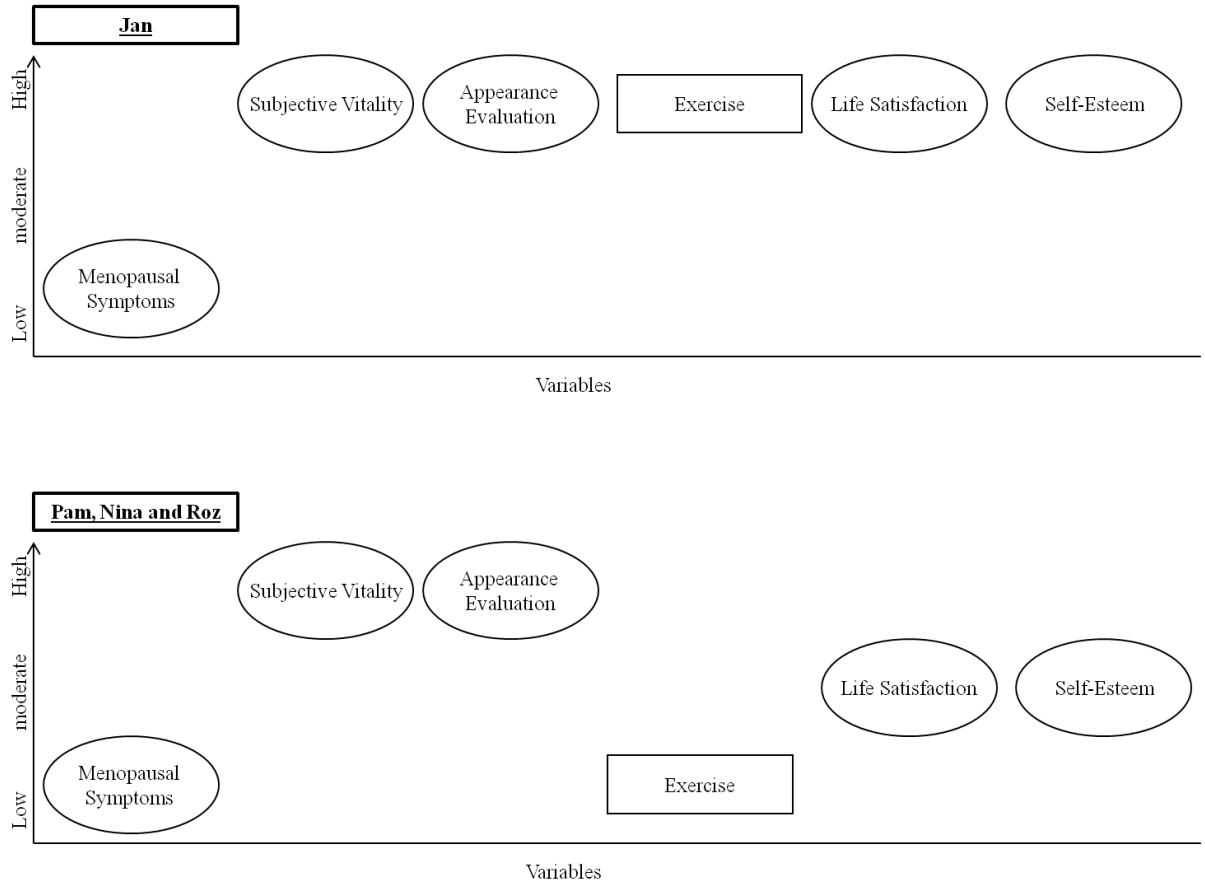

Figure 5.4: Representational graphs of interviewees with low menopausal symptoms.

Pam reported feeling low amounts of symptoms; however ‘hot flushes made me feel blue, which was difficult, especially around a hormonal teenager’. Pam keeps her symptoms ‘private’ and ‘isolates’ herself, especially when ‘emotional so as not to burden others with it’. Pam discussed being generally satisfied with her body size and being ‘lucky’ that her ‘weight was always stable’. However, she said that she now ‘avoids mirrors and photos’ as new photos are a shock compared to old ones’. She compared herself to her daughter and her mother, saying her daughter was ‘gorgeous’, where as she was ‘invisible’ and had a ‘double chin, droopy eye and wrinkles’ but she ‘did not feel different inside’. She felt she was now ‘turning into her mother’, which ‘takes time to get used to’. On a positive note, Pam views herself as a ‘positive role model’ for her daughter, ‘staying as positive and healthy as I can’.

Nina worked as a pharmacist and felt that her knowledge helped her to cope with the transition. She explained that she is a ‘busy person’ so has ‘little time to feel sorry for myself’ and that the menopause is ‘just inevitable’ and that women should ‘just live with it’. She felt that ‘some people focus more on symptoms’, but expressed that ‘attitude is important just like in the experience of pain where there are different thresholds and some people seem to suffer more’. She was happy with her body image as she does not feel she has ‘aged in appearance yet’, even though she has ‘always felt a bit overweight’. Nina felt worried about the potential to experience ‘sexual changes’ but approached this with the attitude that she would cope with it if it arose. Her recommendations to other women experiencing the menopause summarised her approach well, ‘it is no big deal, do not let it ruin your life, treat one symptom at a time’.

Roz approached the menopause and her body ‘like a constant experiment’, ‘not only are the solutions so individual, but the individual keeps changing!’ Her life story has had a large

impact on her body image. Her first husband ‘made me phobic about wrinkles, he did not want me to grow old and made me use an electric wrinkle machine to get rid of them, very stressful’. She expressed how she ‘did not want to grow old with him’ and now has a much more supportive second husband, ‘he has a positive view of me, which is helping my attitude. He keeps telling me how beautiful I am so I tell him never to get glasses!’ She admitted that she did not want to talk to doctors about the menopause, especially those younger than her as she felt she was ‘slightly disintegrating down there’. She wanted to find out ‘how to become more robust down below’ as she felt ‘anxiety about losing sexual spontaneity and pzazz’ but feels more confident that both her husband and herself ‘understand ageing, you get used to it and carry on making the most of life’. She discussed how she had always looked young for her age and in the past felt that she has been a passive bystander in her life, now she feels she has ‘the distinguished look’, which she ‘quite likes because the reflection tells me I am an older person and have some wisdom and am taking more responsibility for myself. I am no longer a victim of circumstance’. Although, feels concurrently ‘worried about losing my looks as they have compensated for other shortcomings and helped me get through life’. Her experimental attitude and curious approach to the next stage of life allows her to embrace the menopause and cope with challenges she faces.

The remaining eight participants reported high levels of menopausal symptoms. Sophie, Val and Kelly all reported low levels of subjective vitality, appearance evaluation and were non-exercisers (figure 5.5). Sophie reported low levels of life satisfaction and self-esteem, with Val and Kelly reporting moderate levels.

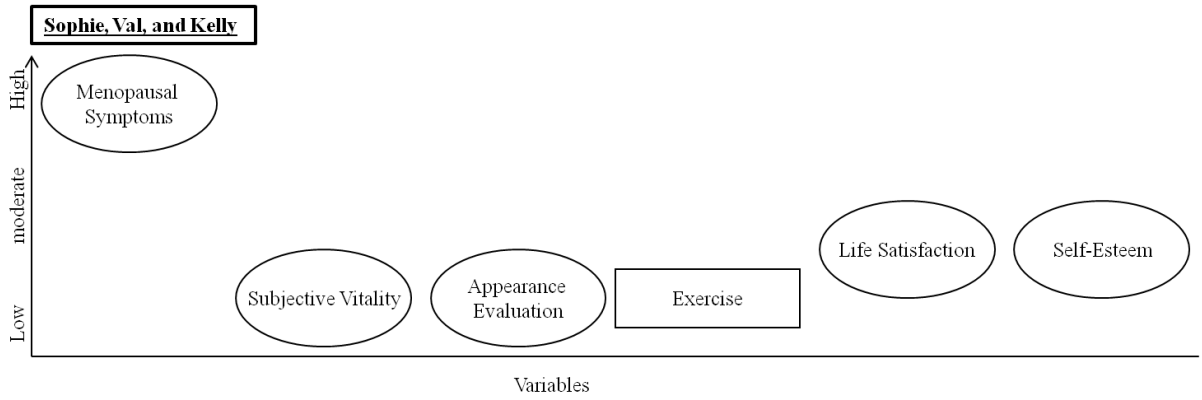

Figure 5.5: Representational graphs of interviewees with high menopausal symptoms, low vitality, appearance and exercise participation, and low/moderate wellbeing.

Sophie and Val similarly reported high amounts of symptoms, which in the interviews admitted were hard to cope with and both discussed low levels of vitality and wellbeing as a result. Sophie felt that her premenstrual tension had been replaced by depression and low self-esteem during her menopausal transition. She felt that she was 'not in control' of her feelings, and suffers from 'less energy', 'bouts of poor sleep' and finds it 'difficult to keep weight down'. She feels that walking on her commute to and from work helps her to 'get out the house' and increase her mood. However, she finds it 'frustrating as running out of steam sooner than I used to', which weakens her psychologically 'I wanted to shut myself away, it is so easy to give in to the temptation to hide'. As a result she expressed feeling 'cross with myself for not losing weight and making myself look better'.

Val feels that her symptoms cause her to feel 'frustrated, tired and not on the ball'. She feels like nothing helps or hinders her symptoms and is looking forward to a time when they are over. She enjoys walking her dog even though she did not report taking part in any structured exercise. Despite reporting low evaluations of appearance in the questionnaire, she said in the

interview that she is happy with the way she looks as long as she can keep her menopausal symptoms hidden from other people. She told a story of a time when someone noticed she was having a hot flush and announced it to everyone at her work and how embarrassed this made her feel. As long as the menopause could be kept 'personal and private', she felt positive about her appearance.

Kelly was 'glad to be shot of the hormones', although she now finds the heavy periods irritating and tiring. She said 'I put on weight, felt sluggish and my body image was not good'. This made her feel she 'looked middle-aged', and 'stopped clothes shopping' because she 'hated mirrors'. She 'does not want to look old', and 'spends money on hair to get rid of silver' because she is 'not ready for that transition yet'. In order to 'take control back over my life', she started participating in exercise and lost weight. She discussed that it was not the exercise itself that made her feel better, but the weight loss as 'my clothes fit better, which makes me feel good in them'. She explains that 'we all have a mental picture of ourselves and want to maintain our present appearance as long as possible'. However, as she is 'not a natural exerciser', she explains that she 'has to be prodded to take regular exercise', so her husband provides her with an external incentive of money to buy new clothes if she reaches her target weight.

Trudy and Holly also reported low levels of subjective vitality and appearance evaluation, with moderate levels of life satisfaction and self-esteem; however they did participate in structured exercise (figure 5.6). Additionally, these were the only two interview participants who reported in the WHQ that they felt they could not cope with their symptoms.

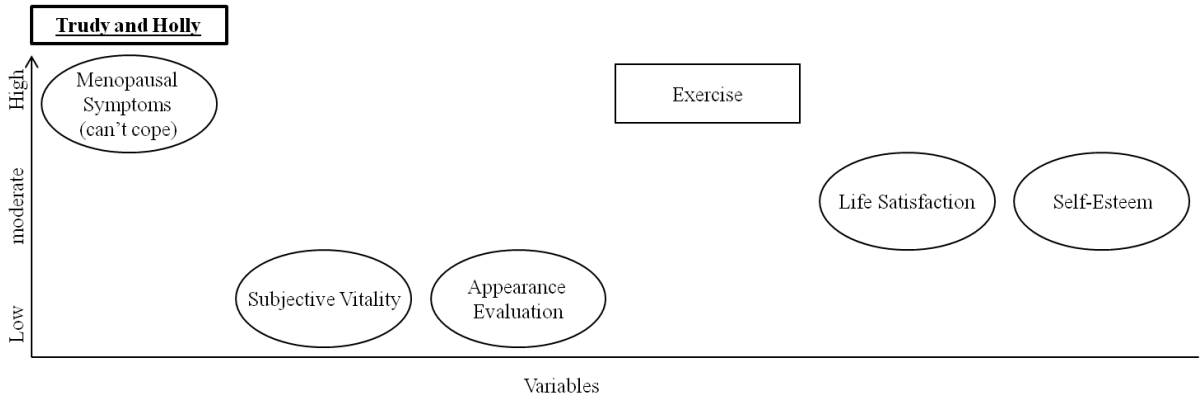

Figure 5.6: Representational graphs of interviewees with high menopausal symptoms, low vitality and appearance, high exercise participation and moderate wellbeing.

Trudy felt that menopause was a 'sign of old age' and 'about mortality'. The transition made her feel 'less attractive and less feminine' in society making 'weight issues very important' at this time in her life, which coincides with her beautiful daughter becoming a young adult and leaving the 'nest', which 'rubs my nose in it'. The disruption her menopausal symptoms have on her life makes her 'feel low'. She expresses that exercise does make her feel better as 'watching weight is something I can control' and 'when I make the effort to exercise, I feel more cheerful and positive'. However, due to being in full time employment, looking after a 'son with disabilities', and feeling tired, she often finds reasons not to exercise, 'sometimes I feel justified, sometimes I disappoint myself so I get on with something else instead'. She says that although she would 'like to feel more positive and have more self-belief', she feels 'empty about the future' and 'does not look forward to things' because the menopause and her children growing up means that 'everything in life is changing' and the future cannot be foreseen.

In contrast, Holly approaches her menopause largely with the proactive aim of reducing her symptoms and improving her health. She explained how she 'was dreading the menopause

based on other women's stories' but now she is experiencing it she has found 'ways of adjusting' her lifestyle to cope, 'I feel I have tools at my disposal to do this'. She feels that knowledge of what she is experiencing and how to help it has been very important to her, for example when she started suffering from IBS during her perimenopause, she changed her diet and felt this was a 'more acceptable way of controlling health problems than pills'. She started exercising at the onset of menopausal symptoms and finds it helps her mood, cope with stress at work easier, not get annoyed as much and feel good. Holly was 'keen not to take on the image of a middle aged woman - someone who does not bother anymore because it does not get better from here'. She felt the increase in regular exercise had helped her to achieve this. Coinciding with this was an adjustment about how she defined an 'ageing woman' and how this was different to a 'look of maturity'. She liked her wrinkles and grey hair and felt this was encompassed within the mature look that was 'attractive to the opposite sex as long as I wish to be attractive to them'. She discussed herself ageing in the future, 'I know I am "ageing", but each age hosts its own rewards, I want to age gracefully. This is a new phase in life with more freedom. I can loosen the apron strings. I am looking forward to it'.

Despite reporting a high level of symptoms, Zoe Mandy and Lynn all exercised and reported high levels of subjective vitality, appearance evaluation, life satisfaction and self-esteem (figure 5.7).

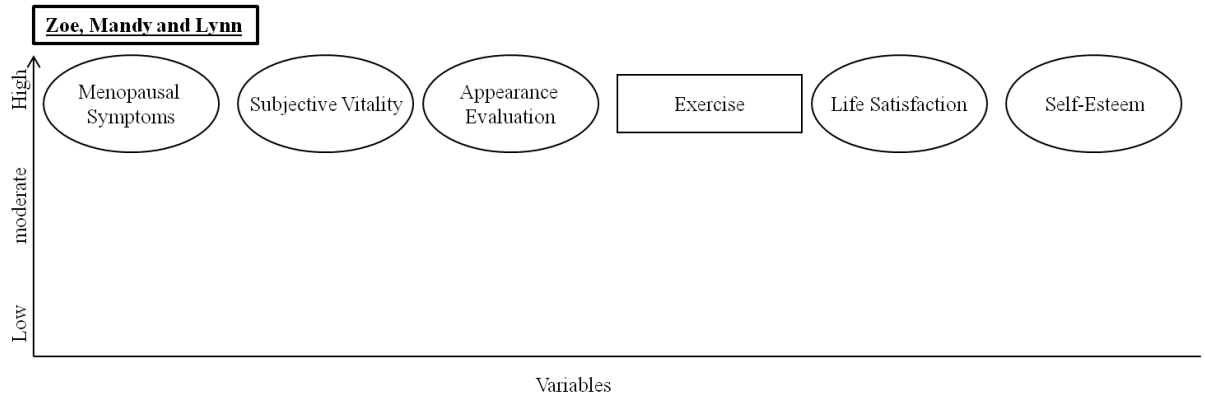

Figure 5.7: Representational graphs of interviewees scoring high levels for all variables.

Zoe also felt able to cope with her menopausal symptoms even though she reports a high amount, as it 'has not felt like a big deal because it seemed so gradual'. She could not have children when premenopausal and felt large pressure and expectations on her from society, which led to depression. Now she is menopausal, she 'does not have to think about that anymore' and finds it easier to deal with anxiety if the cause is attributed to 'hormones rather than psychological'. Therefore, she explained that 'the sense of being past it is a positive for me'. She feels that she accepts that change in her life and views the menopause as 'the reverse process to puberty', so she is 'waiting for the same symptoms to occur'. Although Zoe reports that she evaluates her appearance highly in the questionnaire, she reveals in the interview that even though she feels she has a 'healthy appearance and BMI', she has never been satisfied with her weight. She felt even more 'irritated' that the menopause had affected her ability to 'maintain or lose weight'. At the time of the interview, she had begun to be more proactive to improve her health and appearance, 'my motivation for exercise really comes from trying to maintain a body I have not looked after particularly well in the past and now it is starting to fail'.

Although Mandy reported many symptoms in her questionnaire, she perceived herself to be someone with low symptoms, and 'lucky' as the menopause 'hasn't been the horror story that I was led to believe'. As her symptoms tended to appear intermittently, she still felt 'pretty normal'. However, she feels 'in touch' with her body, and when she does experience menopausal symptoms she feels 'something is wrong', 'tired' and 'under the weather'. She decided to change the things that made her tired and brought on hot flushes, such as alcohol and spicy food. Mandy explained, 'when I knew what was happening to my body and as I became aware of things that hindered my symptoms, there was an element of self-help'. She admitted that 'there is always resistance to reducing things you enjoy, but when it makes you feel better and healthier it makes sense'. Mandy expressed how exercise participation helps her to achieve her health goals. She is not sure if it directly helps her menopausal symptoms, but 'feels more alive and energised' and feels it helps indirectly as her 'body is better able to cope if it is fitter'.

Mandy addressed the difficulty for women to 'age with confidence (and acceptance)' as 'the media has a shameful reputation of dictating what looks good: young, slim and beautiful'. She felt sad that her body had changed and that it was hard to 'feel good in this false environment', but had managed to compartmentalise the media's influence separately from her body image, 'away from all that, I feel great'. She felt she still looked young and that her and her partner were 'happy with the inner me'. She used other women as her inspiration to feel that way, 'I remember looking at older women when I was younger thinking they were stunning inside out and I aspired to be like them. It works!'

Lynn has a very holistic approach to her menopause and her body. She is very proactive and feels it is very important to understand your body and emotions and take control of your

experiences and pain, ‘do not blame other things for what is pissing us off, deal with it, find the source and take responsibility for it’. She explains that your body feels different while developing through this life transition and so ‘self-acceptance’ and raising awareness of your body are useful tools to help you deal with this.

> ‘Who you are, what you can do and how you move changes, so you respond differently to the same processes outside. I need to pay more attention to my body to get the same results and do the things I did before the menopause. I cannot take my body for granted like I used to. Feel more mature and have a bigger sense of who I am. I feel more gratitude for what my body has coped with.’

Lynn has a high BMI but does not feel that her self-worth and wellbeing are contingent on her appearance. She has taken up exercise, but mainly with the motivation of feeling better, ‘you cannot hold two states/ emotions at the same time. The gym helps to change it and creates the possibility to think and feel differently. I always come out smiling’. She is not only proactive for her own improvement but also runs a women’s weekly empowerment group to help others too. When discussing her future she places emphasis on being wise, happier and being ‘more able to enable those around me’. ‘I do not intend to roll over and give up. I shall be one of those grannies scuba diving.’

Discussion

In line with our hypothesis those with high menopausal symptoms tended to have low feelings of vitality and low evaluations of their appearance. This was the case for 5 of the interviewed participants who reported high levels of menopausal symptoms in the questionnaire (Val, Kelly,

Sophie, Trudy and Holly). They said that their menopausal symptoms made them feel tired, drained and frustrated with the changes to their bodies. This confirms the findings in the model, as those with low levels of subjective vitality had significantly low levels of appearance evaluation and exercise behaviour. Future interventions to increase exercise in menopausal women could consider these findings in the context of the Health Belief Model (Rosenstock, 2005) of behaviour change in relation to their perceptions of symptoms and tackling the associated barriers.

In the model, the relationships between menopausal symptoms and exercise behaviour, and exercise behaviour and both wellbeing measures (life satisfaction and self-esteem) were not significant. This weak non-significant direct relationship has also been the case in previous interventions examining the effect of exercise on menopausal symptoms (Daley, et al, 2009; 2011). Therefore it is clear that this is a complex relationship that needs to be considered further in relation to individual difference. In the interviews, there were a range of incentives (e.g., to feel in control, slow down the effects of ageing, lose or maintain weight, help body feel better able to cope with symptoms, enhance mood) and barriers (e.g., tiredness, other life commitments, does not enjoy exercise, does not perceive themselves as an exerciser) to exercise participation discussed. Therefore, we can turn to the complexity of the qualitative findings to help give insight into the non-significant result in the model.

The complex relationship between the incentives to exercise to reduce menopausal symptoms, feel in control and cope better; while menopausal symptoms (in addition to the commonly stated reasons not to exercise) can act as barriers to exercise implies that this relationship could be reciprocal. In addition, there are more factors that need to be considered in

the future development of this model, such as motivation and control. This is an additional benefit of carrying out qualitative research alongside a cross-sectional model where the direction of causality cannot be determined. SEM is useful to investigate the associations, while qualitative research can examine in further depth why those paths may or may not go in specific directions and inform future research in this field.

The model also provides evidence that women with low menopausal symptoms tend to have high feelings of vitality and high evaluations of their appearance, which was the case for four of the interviewed participants (Nina, Pam, Roz and Jan). In the model, there was a significant indirect path from menopausal symptoms to subjective vitality, to exercise behaviour, to appearance evaluation and then to both life satisfaction and self-esteem. So for example, Jan experienced low levels of symptoms, felt high in vitality, exercise regularly, reported high evaluation of appearance, satisfaction with life and self-esteem. This supports the findings by Elavsky and McAuley (2007a, 2007b) that physical activity effects self-esteem only when mediated by perceptions of attractiveness.

Not all participants that were interviewed followed the hypothesised pathways in the model, for example, Zoe, Mandy and Lynn reported a high amount of every variable in the model. However, the key aspect here seems to be that they perceived that they experienced a low amount compared to others or that their symptoms only had a minor impact on their lives. As a result, their feelings of vitality and perceptions of appearance were high. This finding suggests a woman's interpretations of her menopausal symptoms may be an important factor to consider with this model in the future. If a woman perceives her symptoms to be of low impact to her life then the symptoms may be less likely to impact upon her vitality levels, exercise participation,

appearance evaluation, and wellbeing. In addition, Zoe felt that it was easier to deal with her depressive symptoms when they could be attributed to her hormonal fluctuations associated with the menopause rather than a mental health condition. Thus, corroborating the findings in Ayers, Forshaw and Hunter's (2010) review of attitudes towards the menopause and menopausal experiences.

In agreement with the previous qualitative work interviewing women who had undergone a surgically-induced menopause, women in this mixed methods study reported reassessing their criteria for attractiveness. For example, Holly felt that those who had an ageing appearance were unattractive and now that she was going through the menopausal transition had redefined this, stating that there was an additional stage before ageing. This was the look of a mature woman who had grey hairs and wrinkles but who was still considered attractive. This also highlights the close interlink between ageing and menopause supporting the findings of Deeks and McCabe (2001). In addition, Lynn specified that even though her body mass index was high, her self-worth and wellbeing was not contingent on her appearance, placing more importance on understanding her body and her wellbeing. This highlights the important role of appearance-contingent self-worth (Crocker & Knight, 2005; Patrick, Neighbors, & Knee, 2004) on body image concerns and wellbeing.

A person's perception of control over their life and body, and their ability to cope with life stressors, menopausal symptoms and body image concerns were important factors to the women and should be incorporated into future research on this topic. In addition, previous evidence suggests that negative cognitive appraisals can perpetuate the feeling of illness from symptoms (Cassidy, 2000). Exercise appeared to be one of the mechanisms used to help these

women feel in control of their changing lives. However, this seemed more difficult when they did not enjoy exercise or see themselves as an exerciser, and felt the need to use external motivation to help them to participate and adhere to exercise (Deci & Ryan, 1985, 2000). However, from the interviews, it seems that the most successful women at coping with the changes and experiencing high levels of life satisfaction and self-esteem were those who accepted that this was part of their natural life trajectory experiencing less biographical disruption (Bury, 1982, 1991), and those that felt empowered to proactively deal with each of their symptoms and bodily changes individually. It is important to learn from the positive experiences of the women, to help inform the implementation of future support for women experiencing the menopause.

Inherent within these interviews was also the importance of social and emotional support for these women. Mandy aspired to be like the beautiful older women she saw as role models, and Pam revealed that she felt it was important for her to be a good role model for her daughter no matter how she felt about her body. Some women mentioned that the knowledge that their partners find them attractive and will continue to love them whatever the future brings for their changing bodies was a large comfort and source of support. Roz said that she had left her previous husband as he placed a high level of importance on her maintaining her appearance, which lowered her life satisfaction and self-esteem. However, she is now very happy with her new husband who is very supportive and loves her for who she is rather than what she looks like. Lynn felt that social support was so important that she runs a group for menopausal women to discuss ways to be proactive in living through the menopausal transition and to empower women to be able to face future challenges. Future interventions to help emotionally and socially support women experiencing the menopausal transition and its associated bodily changes may benefit

from improving a woman's self-efficacy (Bandura, 1977) to address and self-manage (Lorig & Holman, 2003) these changes alongside other stressors she is facing in her life.

Methodological reflections

This model has provided a successful start, but it is limited in its retrospective cross-sectional nature. It is important to be cautious about the interpretations of the findings as the quantitative questions were self-report and although the interviews examined a range of measurements on the model, the explanations that those participants discuss in relation to the model cannot be generalised to represent all of the participants that completed the questionnaire. However, this study does provide novel insight into the breadth and depth of the interrelationships between the variables in the model.

It should be acknowledged that there may have been some limitation in the measurement used, as with any type of research. Val and Zoe both reported different levels of appearance evaluation in the questionnaire than they did in their interviews. It was unclear why Val evaluated her appearance lower when she completed the questionnaire. However, she did say in the interview that she is happy with her appearance as long as her symptoms were not so bad that she thought other people could tell she was experiencing the menopause. Even though the questionnaire consisted of trait-based measurements, it is difficult to account for how each participant feels at the time that they complete the research and the effect this has on the results. Furthermore, Zoe revealed that this was actually because although she generally feels happy with her appearance, she has always felt dissatisfied with her weight. While, the questionnaire was designed to specifically measure evaluation of appearance, the interview was semi-structured and allowed the participants to talk more generally about their perceptions of appearance and how

they felt about it. This enabled us to delve into the topic in more depth and find that Zoe's continuous dissatisfaction with her weight supports the findings from Tiggamann's (2004) review that body dissatisfaction remains stable throughout the lifespan.

The focus of this study was on structured sport and exercise rather than general physical activity levels, such as active commuting, activity at work, or gardening. However, this resulted in Sophie and Val being counted as non-exercisers, even though Sophie walked during her commute to and from work, and Val walked her dog regularly. In relation to the model these women reported high menopausal symptoms, low levels of vitality, appearance evaluation and low/moderate wellbeing. Therefore, their pathways in the model support our hypothesis. It should be considered that it may have been the regular walking that stopped their wellbeing from being very low, and this is a potential area for further research to clarify.

To build on this model, it would be useful to investigate how changes in menopausal symptoms may cause changes in subjective vitality, exercise behaviour, appearance evaluation and wellbeing. A longitudinal model could examine the direction of the relationships and whether they are reciprocal. It is recommended that future research examines hormonal fluctuations in perimenopausal women over a menstrual month or over a woman's journey through the menopausal transition tracking the changes she experiences and the decisions regarding behaviour she makes as a result. It is also clear from examining the qualitative research in line with the model, that there are additional factors that could be considered when developing the theory in this complex field, such as attitudes towards symptoms, motivation to exercise, feelings of control, and ability to cope with symptoms and body image concerns. Zoe also discussed the relief that the menopause brought for her as she could not have children prior to the

menopause. It will be interesting for future research to examine women like Zoe further to see how this difference may change the view they have to the menopausal transition and how this may impact on their lives, perceptions and behaviours.

Conclusion

This mixed methods study creates a start in exploring the interrelationships between menopausal symptoms, exercise behaviour, and perceptions of appearance, vitality and wellbeing. The breadth of the quantitative Structural Equation Model combined with the depth of the qualitative interviews examines the concept that menopausal symptoms reduce a woman's feelings of vitality acting as a barrier to exercise participation, lowering her perceptions of her appearance, satisfaction with life and self-esteem. All of the predicted relationships were found to be significant except for the direct paths between symptoms and exercise, and exercise and wellbeing. The qualitative research provides insight into the potential reasons why these relationships may or may not be confirmed. It is recommended that future research examine longitudinally how changes in menopausal symptoms may cause changes to the other variables, and how attitudes to menopause, motivation to exercise, perceived control and coping are related to the model.

CHAPTER 6

Discussion

Overall, research around the health and wellbeing of the menopausal transition and body image is a growing field of research currently consisting of exploratory-based studies that highlight the complex and individual experience of the menopausal transition and the intertwined relationship with body image, exercise and wellbeing. More research is needed to explore the potential direction of causation and reciprocity between these factors. Future research should also address the multifaceted nature of perceptions regarding bodily changes during the menopausal transition as attributed meanings may be both positive and negative simultaneously, which impacts a researchers means of measuring this perceptual aspect. In practice there is still a heavy focus on the biological/physical aspects of the menopausal transition, with (Western) women often being led to focus on the end stages of their life (i.e. 'a closing down of purpose' – Helen). Research focusing on the psychological aspects of the menopausal transition is in its infancy and requires further exploration. It is clear that the menopausal transition can be a period of ambiguity for a woman, while others experience positive or neutral transitions. It is important to learn from these women's experiences to develop methods of intervention and implementation to support adaptive coping and self-management across this transition targeted to a diverse group of women.

In this thesis, exploratory research has been carried out, which examines women's experiences of the menopausal transition in relation to their body image, exercise behaviour and wellbeing. In the introduction (chapter 1), I discussed the history of research into the menopause driven forwards with foci on biomedical and sociocultural perspectives. The limited understanding of psychological processes associated with symptomatology and the body over the menopausal transition provided the rationale for this doctoral work and the need to begin at the exploratory stage in terms of this line of inquiry.

The first step was to examine the key variables of interest to this thesis and the existing literature. Reviews existed regarding exercise and body image (Campbell & Hausenblas, 2009; Hausenblas, Brewer & Raalte, 2004; Hausenblas & Fallon, 2006; Leary, 1992), exercise and menopause (Daley, et al., 2009; 2011), body image and wellbeing (Cash, 2004) and exercise and wellbeing (Berger & Motl, 2000; Netz, et al., 2005; Paluska & Schwenk, 2000; Penedo & Dahn, 2005). However, to date, there had been no review investigating the relationship between menopause and body image. The research in this field was very heterogeneous using a variety of quantitative and qualitative methods examining a range of ideas regarding the relationships between menopause and body image. Chapter 2 systematically reviewed the past 20 years of literature examining women's body image over the menopausal transition to inform policy, practice and further research in the field.

The relationship between menopausal symptoms and body image was investigated in a variety of directions, with both concepts being examined as independent, dependent and sometimes mediator variables. The findings showed that overall premenopausal women regarded themselves as more attractive than menopausal women (Deeks & McCabe, 2001; Koch, Mansfield, Thurau, & Carey, 2005), but also that body satisfaction tends to remain stable throughout the transition (McLaren, Hardy, & Kuh, 2003). However, women experiencing a surgical menopause were less likely to feel satisfied with their bodies than women experiencing a natural menopause (Bellerose & Binik, 1993). Alternatively, women with higher perceptions of attractiveness, self-esteem and positive attitudes towards the menopause experienced fewer symptoms (Bloch, 2002), felt healthier, and had a higher meaning and quality of life (Jafary, Farahbakhsh, Shafiabadi, & Delavar, 2011). Low body shame also strengthened the positive

relationship between appearance-related menopausal attitudes and body esteem (McKinley & Lyon, 2008).

This systematic scoping review highlighted the complex relationship between body image and the menopausal transition. The research findings emphasized the multiple reactions women have to the menopause and the associated bodily changes, which can be perceived as both positive and negative simultaneously (Brayne, 2011; Deeks & McCabe, 2004; Dillaway, 2005; Hvas, 2006; Rubenstein & Foster, 2013). These findings hold implications for provision of support for women trying to cope with these changes, and the need to progress quantitative measures to capture these complex responses (rather than just assessing whether a woman thinks a change is positive OR negative). The research also highlighted the perceived ambiguity about conflicting advice given to women regarding how best to cope with bodily changes and symptoms (Ballard, Elston, & Gabe, 2005, 2009; Brayne, 2011; Dillaway, 2005; Hvas, 2006; Koch et al., 2005; Rubenstein & Foster, 2013; Stephens, 2001). There was also a tension between wanting to accept the menopausal transition and the ageing process and be carefree, while at the same time wanting to remain feeling young and attractive so that one could gain attention and approval from others (Banister, 1999, 2000; Brayne, 2011; Dillaway, 2005; Rubenstein & Foster, 2013; Stephens, 2001). This ambiguity and conflict hold implications for a woman's self-management, body image concerns and quality of life.

The review findings suggested that subjective experience of the menopausal transition is a stronger predictor than physical changes, such as weight gain and body shape change, on the symptoms experienced, coping ability and body image concerns (Bloch, 2002; Jafary et al., 2011; McKinley & Lyon, 2008). This advocates the need for individualised psychological

support and further research exploring these complex processes. This was a main reason for the focus of the work undertaken in this thesis.

The pilot focus group interview (discussed in chapters 1, 3 and 5) with women experiencing the menopause highlighted two main issues relating to recruitment. For example, the participants in the pilot group interview suggested that women experiencing the menopause may feel uncomfortable about opening up to a premenopausal woman. This was confirmed when recruitment began. For example, when trying to recruit by handing out posters at women only events with the help of my mother, women were very defensive and closed when approached by me. However, when approached by my mother in exactly the same manner they were very talkative and open. We were asking people of all ages if they knew anybody who might be experiencing the menopause and did not suggest we thought they were experiencing the menopause themselves. Despite this, the women often expressed concern that we had talked to them because we thought they looked of 'menopausal age'. This was perceived by them as an insult from me, being someone younger than the women in question. However, this was not so much the case when the women were approached by my mother who is middle-aged and postmenopausal.

Although, in terms of another recruitment strategy, we could have taken the route of recruitment through the NHS, this would have only enabled access to women who have sought their doctor's advice regarding the menopause. This may have missed out women who did not understand the support they could receive, those that were ashamed or embarrassed, or those who did not want advice, including those who were experiencing a positive transition and/or coping well with menopausal symptoms and bodily changes.

Generally in research, another rich participant source is often from social groups. However, it became apparent that there is a limited amount of social leisure groups for middle-aged women or specific social support groups for menopausal women in the UK. This added to the difficulty in recruitment and provided the need to be creative with the advertising. In addition, this flags another potential area of research to address the paucity of formal social support for middle-aged women, specifically for those who are experiencing the menopause. As social support is related to leisure attitude and engagement, psychological distress, optimism and perceived control (Cassidy, 2005), this may be an important consideration for future intervention.

The discussed recruitment issues led to the development of posters that had pull off strips of the study details. These were posted in places where women would not need to remove a strip in front of other people (and admit that they were experiencing the menopause in public), such as on the insides of public toilet cubicle doors. This strategy was the most successful and placing these posters over many areas, including motorway service station toilets, allowed us to recruit a nationwide sample. This even included a participant who saw our poster from the toilets at the top of Mount Snowdon in Wales!

The feedback from the pilot focus group interview and the issues encountered with recruitment inspired the development of the synchronous text-based online interviews in chapter 3. Using this method, the interviews could be carried out at a time and location of the participant's convenience, and created an extra layer of anonymity between the interviewer and interviewee. Although this technique did not bring the advantage of body language communication apparent in face-to-face interviews and excluded participants who were unhappy

using the technology, this interviewing tool provided an interview environment that made the participants feel comfortable to speak freely about a personal and often sensitive topic with a lessened concern about judgements being made of them by the interviewer.

This PhD thesis work was the first to examine the use of a truly synchronous text-only online interviewing tool. Presenting this work at the Midlands Health Psychology Network (MHPN) conference and the health psychology British Psychological Society (BPS) conference enabled me to gain peer feedback and reflect on the use of this tool discussed in chapter 3. Between the presentations of this work and the writing up of this thesis, this tool has also been adopted to interview "nonheterosexual" people living with chronic illness (Jowett, Peel, & Shaw, 2011). Their paper focused on broad researcher reflections of the use of this tool in psychological research. To provide a unique insight, we focussed on i) the logistical use of the tool, and ii) the participants' feedback on their experience of the method. The aim of this was to help inform researchers who wish to use this tool in their future research about the feasibility of the tool.

Complementarity (see chapter 3) is an important concept to reflect upon when researchers are choosing whether this text-IM tool is appropriate to use in future research. The tool may not be useful when interviewing people with poor literacy or IT skills, but may be beneficial when interviewing about personal, sensitive or legal/criminal topics, when research budgets are limited, or when text-based interviewing can be more suitable than verbal interviewing for the participant group (for example, for people with hearing difficulties or verbal communication impairment). Thus, the appropriate use of text-IM may add another methodological tool for researchers to consider. Additionally where a range of interview methods are suitable, potential participants can be provided with a choice of these methods, reducing method bias and being

more amenable (to both participants who do not like technology and prefer face-to-face interviews, and those who do not want a face-to-face interview and would prefer being interviewed online with more privacy and convenience).

Chapter 4 summarises a qualitative study completed using this synchronous text-based online interviewing tool, although this study focused on the results of the interviews themselves. This study aimed to explore the lived experiences of women who had undergone a surgically-induced menopause as a result of a hysterectomy with BSO using an IPA approach. I carried out semi-structured interviews with open questions about broad themes, with general prompts allowing the participants to lead the interview and discuss their transition from having a gynaecological illness, through to having the hysterectomy and their experiences afterwards. These women shared rich stories about their experiences covering many aspects of their lives, including coping with their menopausal symptoms, support, identity, gender, sex lives, and other large concurrent life stressors. However, bodily change was a prominent theme in all of the interviews and seemed to be a pivotal aspect shaping the convergence and divergences between the women's experiences. This was therefore chosen to be the focus of the findings.

Consistent with the findings from the systematic scoping review, there is a further need to examine the in-depth experiences of women experiencing the menopause. Qualitative research examining the role of body image over the natural menopausal transition has already been completed (Ballard et al., 2005, 2009; Banister, 1999, 2000; Brayne, 2011; Deeks & McCabe, 2004; Dillaway, 2005; Hvas, 2006; Rubenstein & Foster, 2013; Stephens, 2001). However, our review highlighted a paucity of research investigating these psychological processes as a result of a surgically-induced menopause and provided the rationale to focus the written report of the

findings on the prominent theme of bodily changes. These changes were discussed in terms of the women's visceral feelings and functional changes, their attributed meaning of the changes, and how these changes related to the externally judged body. The manner in which these women specifically coped with body image concerns was also considered.

The findings from this study highlight the importance of changes in symptoms (both from gynaecological illness and the menopause) to resulting changes to a woman's body image, including appearance, functioning and consequent changes in behaviour. The women often discussed that when they experienced a higher level of menopausal symptoms, this resulted in feelings of low energy levels and tiredness, and vice versa with fewer symptoms and higher energy levels. When they felt low in vitality, they felt more negative about their appearance and their wellbeing, whereas when they had fewer symptoms, their lives felt less negatively impacted and they felt more positive about their bodies and were more likely to feel energetic to exercise. Deeks and McCabe made this suggestion in 2001, but this was never empirically examined. The findings from this study also build on the literature on coping with the menopause, as previously the focus has been on coping with symptoms themselves (Duffy, Iversen, & Hannaford, 2012), rather than coping with the body image concerns associated with the menopausal transition. This added population-specific contextual detail to the literature on coping with body image concerns, including the avoidance of presenting themselves in public or changing the importance placed on appearance and reassessing the criteria for attractiveness. These findings corroborate those found in the work of Liechty (2009), who found that older women also de-prioritised appearance and focused on controllable aspects of the way they look in order to cope with body image concerns related to ageing. The use of exercise that is health-focused rather than appearance-focused was also recommended to reduce body image concerns. The menopausal transition and its association

with the ageing process may act as a catalyst for body image concerns and the need to cope by de-prioritising appearance. This coping mechanism, in turn, helps to keep stability in a woman's level of bodily satisfaction. This may add explanation to why previous research found body dissatisfaction to remain stable throughout the lifespan (Tiggemann, 2004).

In chapter 5, we decided to bring the findings from this thesis work together and build on the existing research examining women's experiences of a natural menopausal transition. The existing literature and the findings from the qualitative research in chapter 4 provided a rationale for the hypothesised model presented in chapter 5. The model included three assumptions regarding direct relationships: i) menopausal symptoms would be negatively associated with subjective vitality, appearance evaluation and exercise behaviour; ii) subjective vitality would be positively associated with appearance evaluation and exercise behaviour; and iii) appearance evaluation and exercise behaviour would both be positively associated with life satisfaction and self-esteem. There were then two assumptions regarding indirect relationships: between menopausal symptoms, appearance evaluation and exercise behaviour via subjective vitality; and between exercise and wellbeing (life satisfaction and self-esteem) through appearance evaluation. This was tested statistically using SEM and then qualitative interviews were used to explore those relationships in more depth. The findings from this study support the hypotheses that menopausal symptoms were negatively related to a woman's vitality levels and evaluations of appearance, but not her exercise behaviour. This may be because a woman's motivation to exercise, appraisal of control and choice of coping mechanism are factors that also need to be considered. However, appearance evaluation and exercise behaviour were positively associated with subjective vitality levels, highlighting the importance of vitality in the relationships between these factors and menopausal symptoms. There was also a significant path suggesting that

menopausal symptoms are negatively related to vitality levels, which are positively related to exercise behaviour, then appearance evaluation and finally life satisfaction and self-esteem. So potentially a woman reporting many symptoms may feel low in vitality, not want to exercise, and feel unattractive, unsatisfied with her life and low in self-esteem. On the other hand, a woman who reports fewer symptoms may feel more energetic, participate in exercise more, feel more attractive, satisfied with life, and have a higher self-esteem. However, as this is a cross-sectional model, the direction of the predicted paths cannot be confirmed and these relationships may be reciprocal or multidimensional. Understanding these processes further, with qualitative experiences to provide potential explanations was an important step to progress and inform this research field.

What these findings mean in relation to existing literature, theory and practice

The experience of symptoms in general and feelings of ill-being bring the body and its dysfunctions into consciousness. This heightened awareness of bodily change (Frank, 1995, 1996, 2002) or 'dysappearance' (Leder, 1990) is often perceived as the physical body's method of sending distress signals to our brains. As embodied beings (Merleau-Ponty, 1962), these bodily changes affect the way people think and feel about themselves and the choices they make about behaviour (Chrisler & Ghiz, 1993). Many of the symptoms associated with the menopause are also related to ageing, such as drier hair and skin, reduced memory and increased risk of osteoporosis (Deeks & McCabe, 2001). This interconnection clearly affects the meaning a woman attributes to the menopause, both at an individual and sociocultural level.

A woman's attitude towards the menopause can influence the level of symptoms she experiences, and this can vary dependent on the cultural views towards ageing and menopause

(Ayers, Forshaw, & Hunter, 2010; Ballard et al., 2009). Additionally, the findings in this doctoral research highlight the differences in experiences for women experiencing a natural versus those who undergo a surgically-induced menopause. The menopausal transition seemed to cause less life disruption if the menopause occurred when and how a woman expected it to, and if she was able to adaptively cope and accept the changes it caused to her life. If the transition was better than the woman expected then this could have a positive effect, making the woman feel lucky. However, if the woman's expectations were not met, such as having the menopause earlier or experiencing more disruptive symptoms, this seemed to cause a higher amount of negatively perceived stress for the woman to deal with. Although this can happen for women experiencing a natural menopause, this biographical disruption appeared more prominent in those who had experienced a surgically-induced menopause (Bury, 1982, 1991). This may not necessarily be the case for all women and cannot be generalised as a result of the qualitative research included in this thesis. However, the lived experiences of these women can be used to shed valuable insight and be used to inform future research on this topic.

It seemed that the experience of biographical disruption (Bury, 1982; 1991) was especially the case if the woman had undergone a surgically-induced menopause at an earlier age to the age she expected to experience a natural menopause, forcing her to cope with the menopausal bodily changes before she had planned. Additionally, there was usually only a short period of time between the diagnosis and/or decision for surgery, and actually having the surgery. This left the women little reflection time regarding the big changes that were occurring to them. The clearest example of biographical disruption was those women who were undergoing exploratory surgery and were given the surprising news that they had had a hysterectomy with BSO performed on them. A woman's reaction to the surgery did differ dependent on how much

she was suffering from symptoms as a result of the gynaecological illness before the surgery. Some women found the surgery to be a relief and felt that they had solved a problem (mainly those with no menopausal symptoms afterwards). Other women felt that they had just changed from one problem to another (those that had gynaecological symptoms before and menopausal symptoms after). Others felt worse afterwards (if they had a gynaecological illness but no symptoms and then had menopausal symptoms afterwards).

The key elements to a positive transition and the ability to cope seemed to be the need to understand the menopause while premenopausal. This is so that women can understand the different ways the menopause might occur and help them to make more informed decisions, and enhance feelings of control. Although women did not feel in control of the bodily changes, those who seemed to cope better with the transition were those who had a perception of control over the action they could take. This corroborates the literature, which suggests that those who perceive themselves as being in control are more likely to cope better with stress (Cassidy, 2001; Early, Cushway & Cassidy, 2006; Lazarus, 1993; Skinner, 1995). Those who understood the menopause and their bodies also tended to be the women who dealt with the issues as they arose. This suggests that women would benefit from education both before and during the menopausal transition regarding the support available to them and context-specific problem-solving skills (Cassidy, 2002).

It is important that we learn from the experiences of those who coped adaptively and experienced a positive transition to inform future intervention and support provided to women experiencing the menopausal transition. The qualitative findings included in chapter 4 and chapter 5 regarding how women experiencing the menopausal transition cope with body image

concerns are important to inform this research area. The next steps for this field would be to assess and validate the Body Image Coping Strategies Inventory (Cash, Santos, & Williams, 2005) with middle-aged and older adults, with the potential of adding new items or factors specific to this population. The cohort of women involved in this PhD thesis research was born around the 1950s. Over the last 60 years, the emphasis on the thin youthful ideal woman has increased, with researchers predicting that the next cohorts of women will find the menopausal transition and its associated ageing more distressing (McLaren, Hardy, & Kuh, 2003; Rubenstein & Foster, 2013). The development of research on body image over the menopausal transition can help us support women to manage their bodily changes, so that even though they may be experiencing symptoms, they still feel satisfied with their lives and have a more positive self-concept and body image.

While evidence regarding life re-evaluation and finding positive meaning when faced with chronic illness (benefit finding) has largely been carried out in relation to patients with cancer (Cassidy, 2012) the findings may be relatable to women experiencing the menopause. This may especially be the case for those experiencing a surgically-induced menopause as a result of gynaecological cancer or a medically-induced menopause as a result of breast cancer treatments (Chandwani, et al., 2010; Scott, Halford & Ward, 2004). Overall, a potential aim to improve the lives of women experiencing the menopause could be the promotion of resilience and post-traumatic growth (Hefferon, Grealy, & Mutrie, 2009, 2010; Prati & Pietrantoni, 2009). This in turn may help women to feel in control of and empowered to improve their lives.

One of the key conundrums inherent in this doctoral work was that despite the general and potential specific benefits of exercise for women experiencing the menopause (Daley, et al.,

2009; 2011), they are one of the least physically active groups (Stamatakis, Ekelund, & Wareham, 2007). Although menopausal symptoms were not significantly associated with exercise behaviour, they were indirectly related through a woman's subjective vitality. Therefore, low subjective vitality as a result of high menopausal symptoms can act as a barrier to exercise. This in turn had a significant negative affect on a woman's body image and therefore her satisfaction with life and self-esteem. As most of the previous research on exercise and menopause examined the effects of exercise on menopausal symptoms, this is an important finding. Future research should not only consider the idea that exercise may improve menopausal symptoms, but that menopausal symptoms may act as a barrier to exercise in a reciprocal relationship. When delving further into the relationship between menopausal symptoms and exercise through qualitative methods, it became clear that it is complex and there may be further mediators involved in this relationship, such as perceived control, attitude towards the menopause and motivation to exercise. Some women used exercise as a means to feel in control of their lives in general as they did not feel in control of their dysfunctional bodies. Others were motivated to exercise due to associated weight gain and changes to their appearance. Alternatively some were demotivated as a result of feeling ill and tired, while others did not see themselves as exercisers and did not enjoy it.

Methodological reflections and future research

This doctoral research was completed using a practical mixed methods approach (Madill, 2007; Plano Clark & Creswell, 2008) with the aim of examining the relationships between menopausal symptoms, body image, exercise and wellbeing. As research in this field is currently limited, it was appropriate to carry out our exploratory studies examining these relationships both

quantitatively and qualitatively, and using these findings to complement each other (Plano Clark & Creswell, 2008; Thøgersen-Ntoumani, Fox, & Ntoumanis, 2005). According to the Medical Research Council (Medical Research Council, 2008), this early phase research is very important and should be used to inform the next phase of intervention.

Recruitment for all of the research included in this thesis was based on women who considered themselves to be menopausal. Participants were provided with the definition of the menopause and menopausal transition consistent with the one provided in the introduction to this thesis. However, I acknowledge the limitations of self-categorisation, especially when relating to a category that is personal and associated with stigma and embarrassment (Cassidy, 2001). Therefore, women who incorrectly did not consider themselves as menopausal or felt too embarrassed to admit or discuss the menopause may not be included. Readers should be cautious about generalizing these findings to women in those categories. As this body of research is focusing on perceptual components, such as the perception of menopausal symptoms, I did not deem it appropriate to compare the women's subjective judgements with objective measures (Hunter & Haqqani, 2011), but this should be taken into account when interpreting the findings.

As a researcher using the text-IM tool, I felt that what the method lacks, it makes up for in its strengths with depth and rapport building from the interview in a different form. The interviews take longer than spoken interviews as it takes more time for most people to type, but this comes alongside the benefits of convenience, and no travel time or cost. I found that when interviewing using the text-IM method, it allowed for more reflection by the researcher and participant as the interview progressed. This can be considered both an advantage and disadvantage, as sometimes the rich data are that which is said without thought, while at the

same time the rich data can be that which is first typed and then reflected upon and more information added to provide extra depth. As the interview transcript can be sent to the interviewee immediately after the interview, it may mean that techniques such as member checking are more valid at this stage than later on in time when the interviewee may have forgotten the detail. The text-IM tool provides researchers with a new tool to consider when designing research, and may provide access to groups where qualitative research is normally difficult. Future research needs to examine the further development of this tool, not only as an online interview tool in research in different circumstances with different populations, but also assess its potential use in practice such as telemedicine and telehealth.

Suggested next steps in this research field are to use a longitudinal model incorporating factors such as attitudes to menopause, motivation to exercise, perceived control, psychological distress and coping to investigate how changes in menopausal symptoms may impact on changes in the other variables in the model in chapter 5. Similarly, a diary methodology can be used to investigate fluctuations in menopausal symptoms over a shorter space of time, such as a menstrual month for a perimenopausal woman. Currently, most interventions tend to focus on one intervention strategy to help specifically improve menopausal symptoms, such as CBT (Ayers, Smith, Hellier, Mann, & Hunter, 2012; Balabanovic, Ayers, & Hunter, 2012), exercise (Daley et al., 2009; 2011; Duijts et al., 2012) and psychoeducation (Tremblay, Sheeran, & Aranda, 2008). Combinations of these approaches such as the mind/body approach by O'Connell (2005) can be developed further to encourage and support women experiencing the menopause to self-manage (Lorig & Holman, 2003). In order to next progress in this direction, it may be useful for a systematic review to be carried out investigating the effectiveness and detail (what works, for whom, when, how and why) of the different types of interventions that may provide a

form of self-management support (for example, education, exercise and/or CBT) for women experiencing the menopause. This can inform how interventions need to be combined and developed in the future and, most importantly, how they can be implemented successfully for the benefit of women who approach and go through the menopause.

Appendices

Appendix 1: Recruitment advertisement posters

UNIVERSITY OF BIRMINGHAM

Menopausal symptoms?
Can you help us?

Do you know anyone who is going through the menopausal transition?

Researchers in the University of Birmingham are interested to know more about women's experiences during the menopausal transition and how this relates to health and perceptions of the self.

Are you female, currently living in the UK and experiencing any of the following menopausal symptoms: periods stopping within last 2 years, irregular menstruation, headaches, tiredness, nervousness, hot flushes or any other symptoms you think are due to the menopausal transition?

There is little research in this area and it is important because the results can inform the effectiveness of suitable strategies designed to assist women in coping with symptoms and maintaining levels of health and well-being at this important point in their lives.

Participation in the study is easy and only involves responding to two questionnaires over a three month period (online or paper copy). Each questionnaire will take approximately 15 minutes to complete. Answers will remain confidential. If you have any questions relating to this study or would like more information please e-mail Gemma Pearce

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Appendix 2: Search strategy for Medline, Scopus and PsychINFO

Menopause				
Thesaurus Terms	**Medline**		**Scopus**	**PsychINFO**
	Menopause/		Menopause/	Menopause/
#1	OR	climacteric		
#2	OR	perimenopause		
#3	OR	peri-menopause		
#4	OR	menopaus* ADJ2 symptom*		
#5	OR	“early postmenopause”		
#6	OR	postmenopause		
#7	OR	post-menopause		
#8	OR	menopaus*		

AND

Body Image				
Thesaurus Terms	**Medline**		**Scopus**	**PsychINFO**
	Body Image/		Body Image/	Body Image/
#1	OR	“appearance evaluation”		
#2	OR	“appearance anxiety”		
#3	OR	“appearance orientation”		
#4	OR	“appearance control”		
#5	OR	“appearance contingent self worth”		
#6	OR	“body confidence”		
#7	OR	“body satisfaction”		
#8	OR	“body appearance”		
#9	OR	“body functioning”		
#10	OR	“body attitudes”		
#11	OR	“body esteem”		
#12	OR	“body investment”		
#13	OR	“body importance”		
#14	OR	“self presentation” or self-presentation		

#15	OR	“self perception” or self-perception
#16	OR	“self objectification” or self-objectification
#17	OR	“perceived attractiveness”
#18	OR	“physique anxiety”
#19	OR	“weight concern”

NOT

Publication type			
Thesaurus Terms	**Medline**	**Scopus**	**PsychINFO**
	letter.pt.		letter.pt.
	comment.pt.		comment.pt.
	editorial.pt.		editorial.pt.

AND

Limits			
Thesaurus Terms	**Medline**	**Scopus**	**PsychINFO**
	human		human
	English		English
	1992 to present date	1992 to present date	1992 to present date

Appendix 3: Information sheet for interviews

Information Sheet of FAQs (for you to keep)

Women's experiences of the menopausal transition through hysterectomy,

and how this relates to health and perceptions of the self.

What is this research about?

The menopause represents an important transition in a woman's life as it can greatly affect health and well-being. Clearly, women are affected differently by the menopausal transition and we are interested in examining some of the psycho-social factors that might explain such differences. It appears that perceptions and feelings about the physical self can be important influences on behaviours that women choose to adopt and the well-being they experience during this phase in their lives. However, very little research has been conducted examining this question. Understanding more about the psycho-social factors that may help explain women's experiences can help healthcare professionals decide upon suitable strategies designed to assist women in coping with symptoms and maintaining levels of health and well-being at this important point in their lives.

What are you asking me to do?

We ask that you fill out a pre-interview questionnaire (approx 15 minutes) and then take part in a one-to-one interview with a member of our research team (Gemma Pearce).

The interviews will be conducted through an instant messaging online service (MSN messenger). If you have not used this service before, more information and instructions on how

to upload the software will be provided. You will be provided with a username and password to log in to MSN so you do not need to use a personal account to participate.

We have chosen to use MSN as some women feel they can open up more about their experiences, from a place that is convenient for them without having to arrange to travel to meet me.

During the online interview, the researcher will ask you a series of open-ended questions. You have the right to refuse to answer any questions you do not feel comfortable with.

Please read through the rest of this information sheet and ask **any** further questions you have regarding the study. If you are happy with the information, you will be asked to fill out the consent form. Once you have done this the researcher will begin the interview.

After the interview, the transcription of the interview will be posted/emailed to you, on which you may comment and return to us if you so wish. The themes from the interview will then be summarised by the researcher.

What happens to the information I give in the interview?

Your identity and data will remain confidential and an ID code will be used in order for the researchers to match up the questionnaire with the interview data. Like with the questionnaires, the interview data will be stored in a locked filing cabinet at the School of Sport and Exercise Sciences at the University of Birmingham, and code identification information will be stored on the researcher's password protected PC. Thus, your identity is not anonymous, but only the researchers on this project will be able to identify your individual responses. When the findings are distributed to the public and professionals in related fields, your identity will be anonymous as only a summary of the results will be reported. All raw data from this study will be safely disposed of 6 years following the completion of the study, in accordance with the Data Protection Act (1999).

You have the right to withdraw from this study at any time without needing to give a reason There will be no negative consequences. Your data will not be included in the study and you can take your data or it will be destroyed by the researchers.

At this stage, please ask any further questions you have about this research project.

Please retain this information sheet in case you have any questions later on. You may contact the researchers at any time using the following contact details. In the first instance, please refer to Gemma Pearce.

Gemma Pearce, MSc

Sport and Exercise Sciences

University of Birmingham

Edgbaston

Birmingham

B15 2TT

[redacted]

[redacted]

Dr. Cecilie Thøgersen-Ntoumani

Sport and Exercise Sciences

University of Birmingham

Edgbaston

Birmingham

B15 2TT

[redacted]

[redacted]

Appendix 4: Consent form

Consent form (For you to hand in to researcher.)

Study title: Women's experiences of the menopausal transition, and how this relates to health and perceptions of the self.

Interview

Please read the following statements and tick/highlight the box if you agree:

I have read and understand the purpose of the study. ☐

I understand what is expected of me during the study ☐

I understand that my identity and data **will** remain confidential. ☐

I understand that my identity **will not** remain anonymous to the researchers working within the research project. ☐

I understand that my identity will not be revealed when the findings are distributed to the public and professionals in related fields, your identity will be anonymous as only a summary of the results will be reported.

☐

I understand that I have the right to withdraw from this study **at any time** without needing to give a reason and without negative consequence. ☐

Please ask any further questions you have about this research project at any time.

Please print your name, sign and date below if you give your consent to participate in this study according to the conditions stated above.

Print name:

Sign:

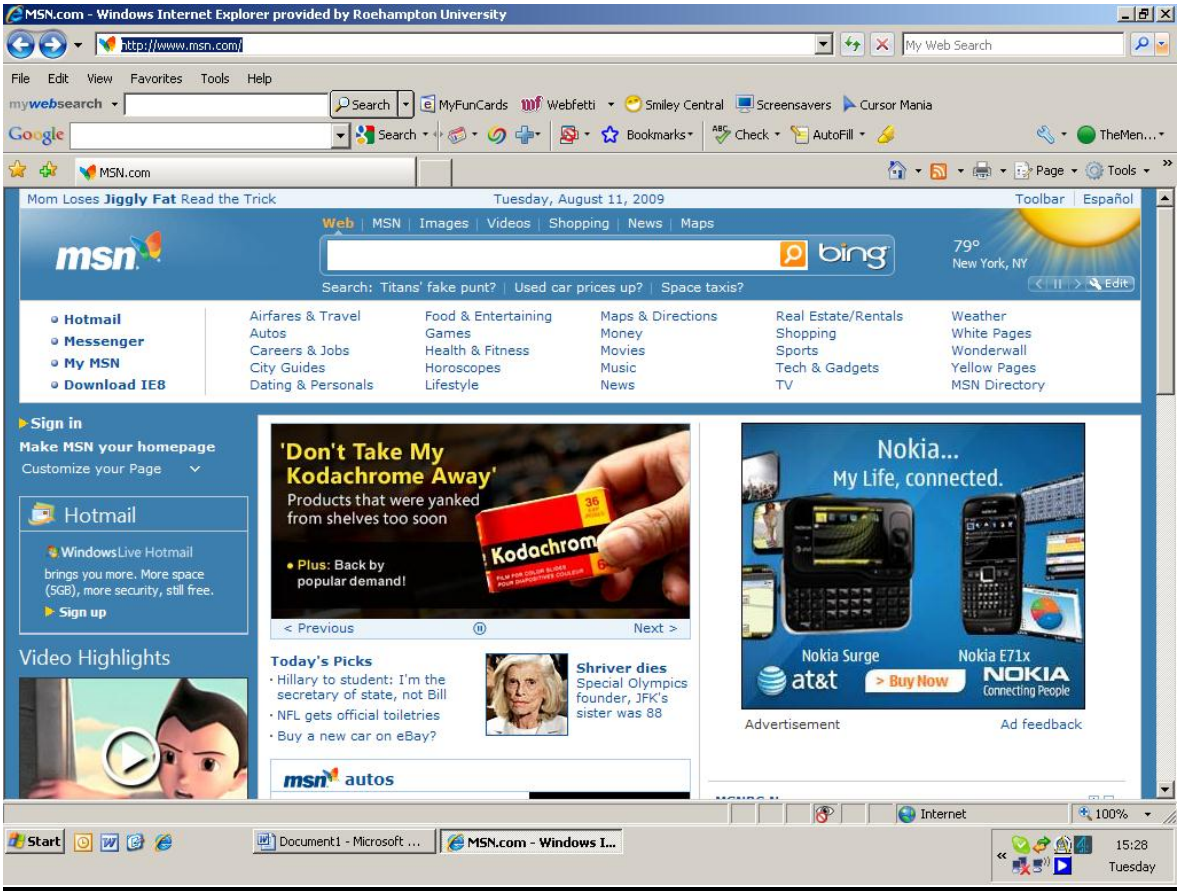
Date:

Appendix 5: Instructions for participants to use MSN

Instructions on how to download MSN messenger service

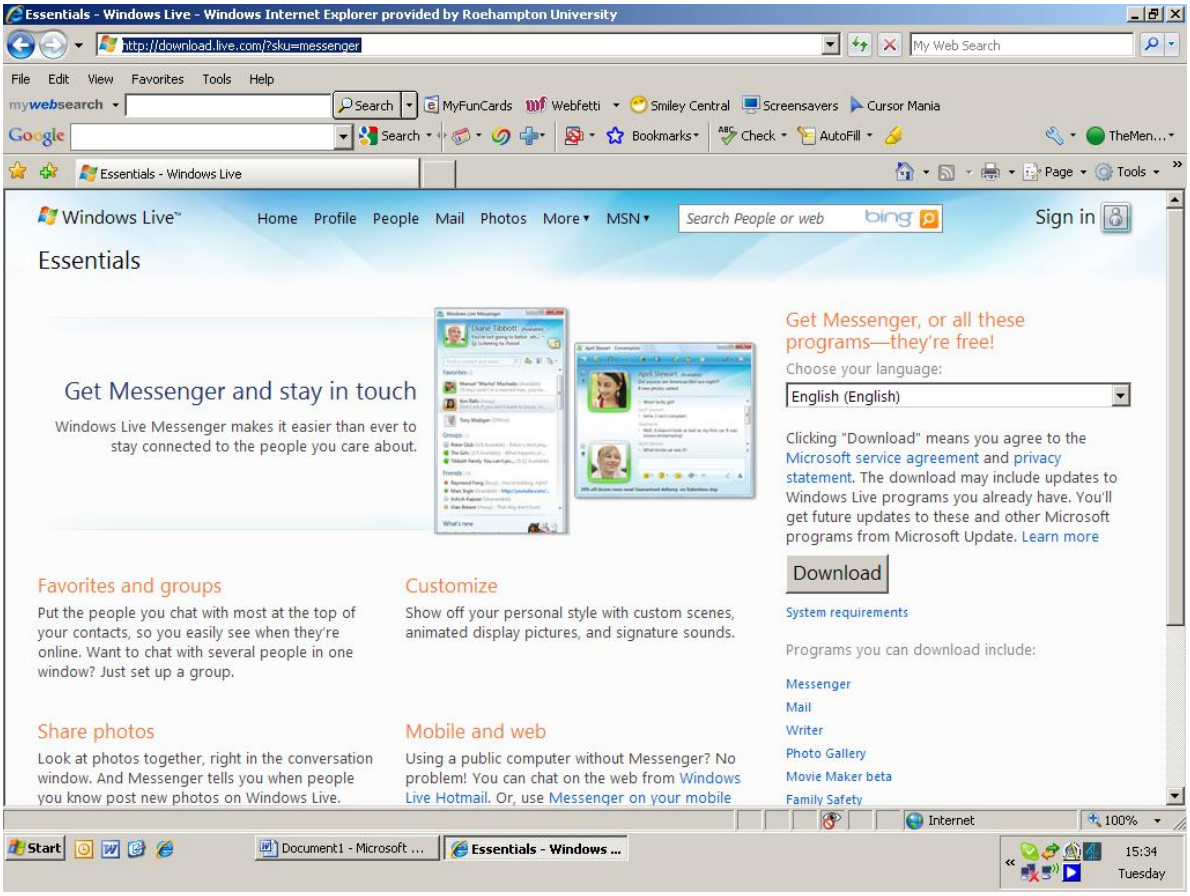
Go to the website: www.msn.com

Click on the messenger option on the top left of the screen underneath the MSN logo.



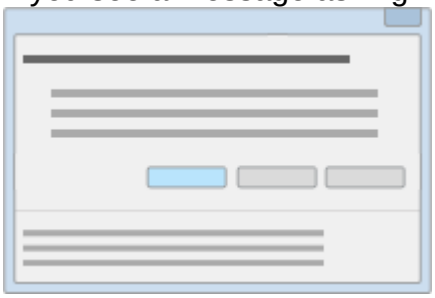
http://download.live.com/?sku=messenger

Click download on the right side of the screen.

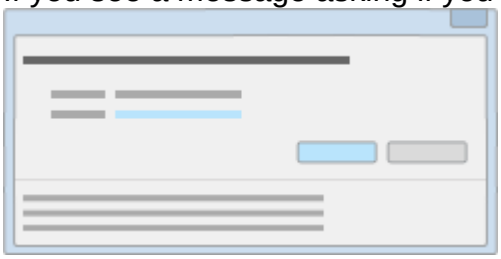


Depending on your security settings, you might see one or more of these messages.

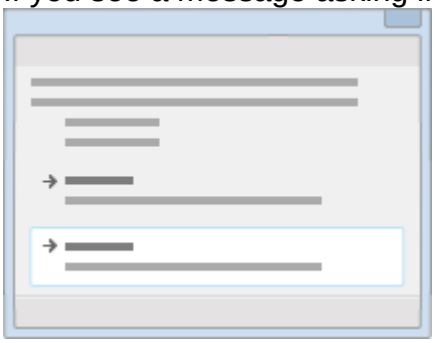
1. If you see a message asking if you want to Run or Save, click **Run**.



2. If you see a message asking if you want to Run or Save, click **Run**.

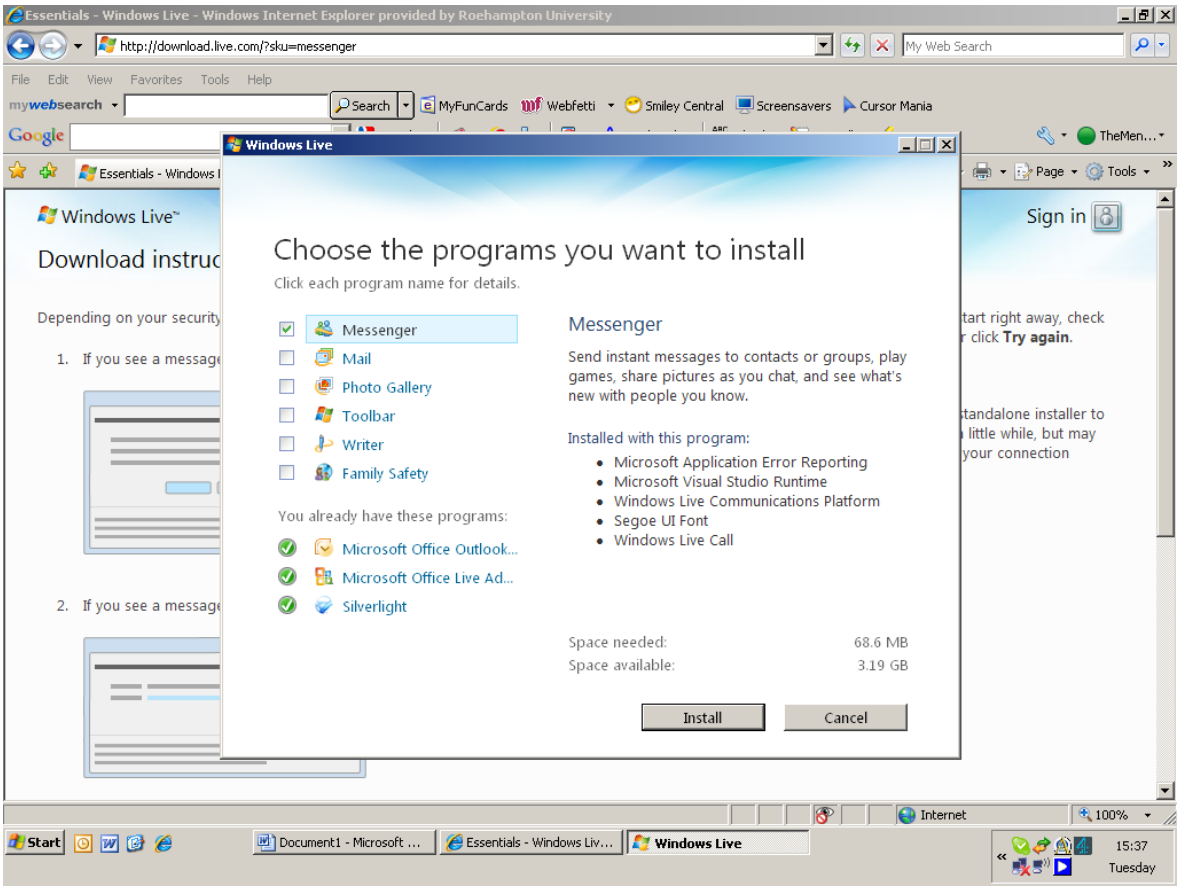


3. If you see a message asking if you want to Cancel or Allow, click **Allow**.

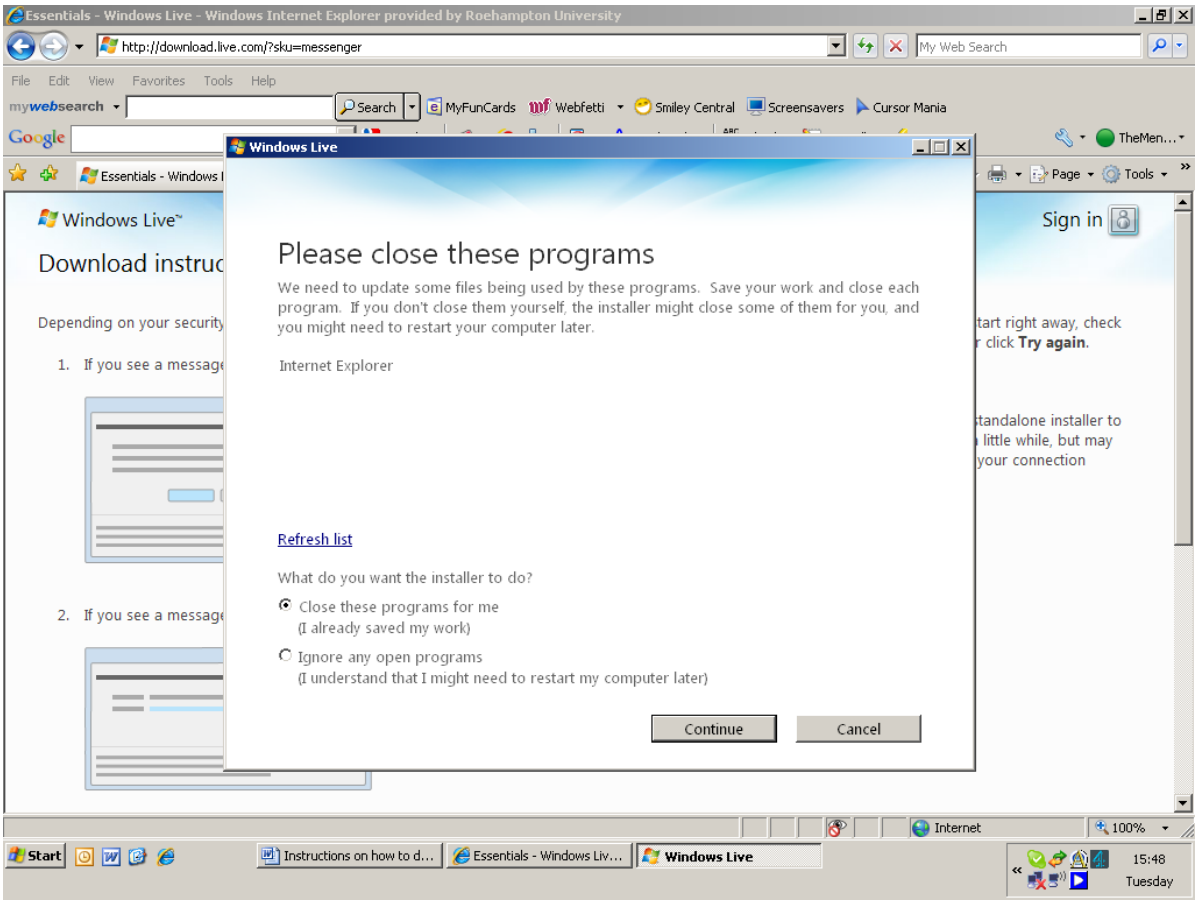


4. Once the installation is done, you'll find your new programs in the Windows Live folder on your Windows Start menu.

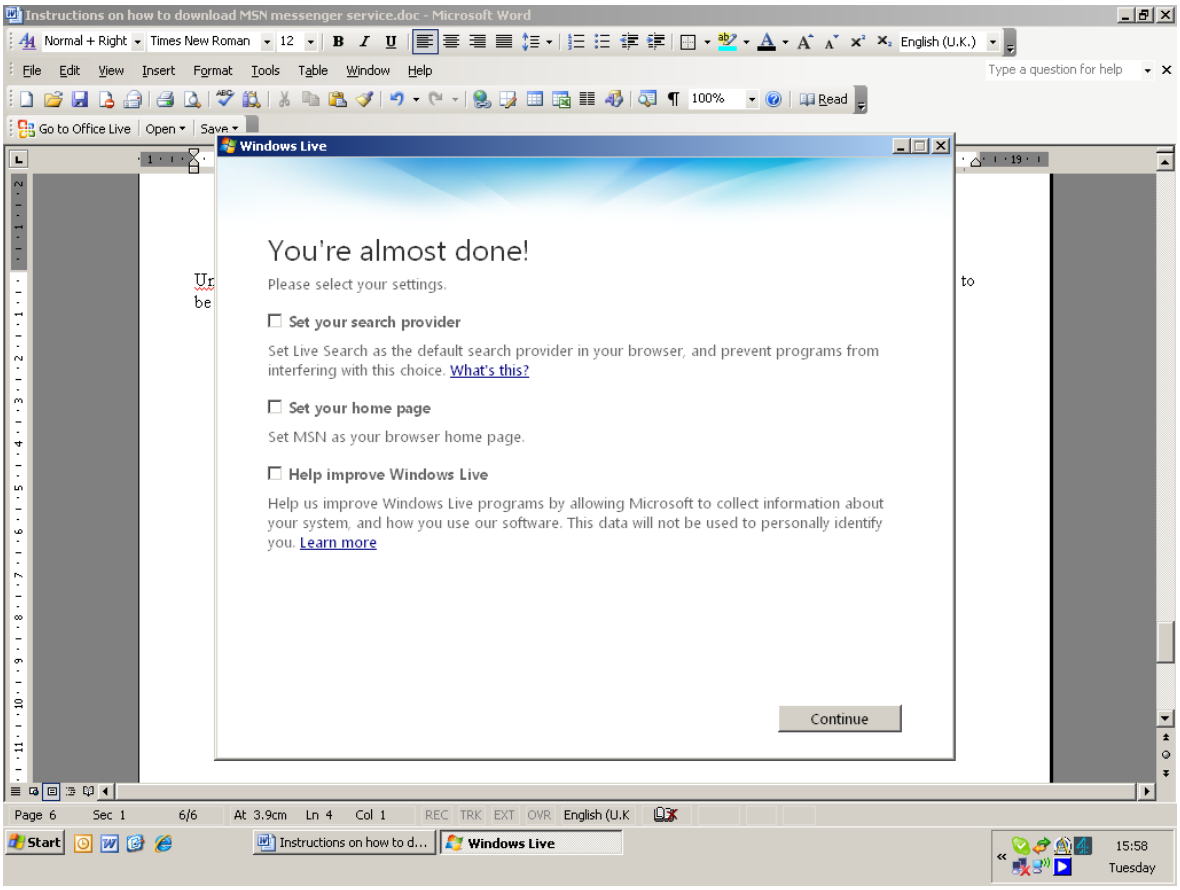
Make sure the messenger option is ticked. You do not need to tick anything else. Click install.



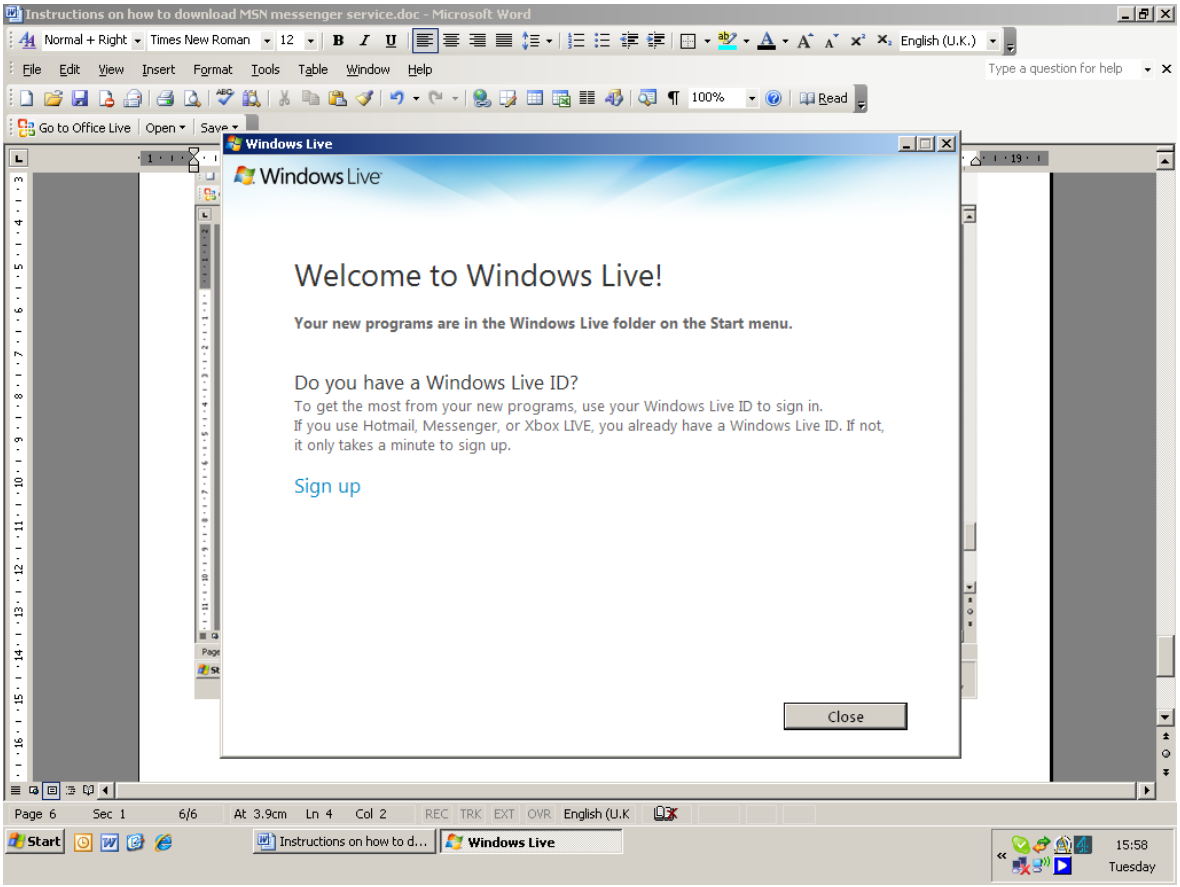
This screen may come up if you have other programmes open. Save your work and then click on close these programmes for me.



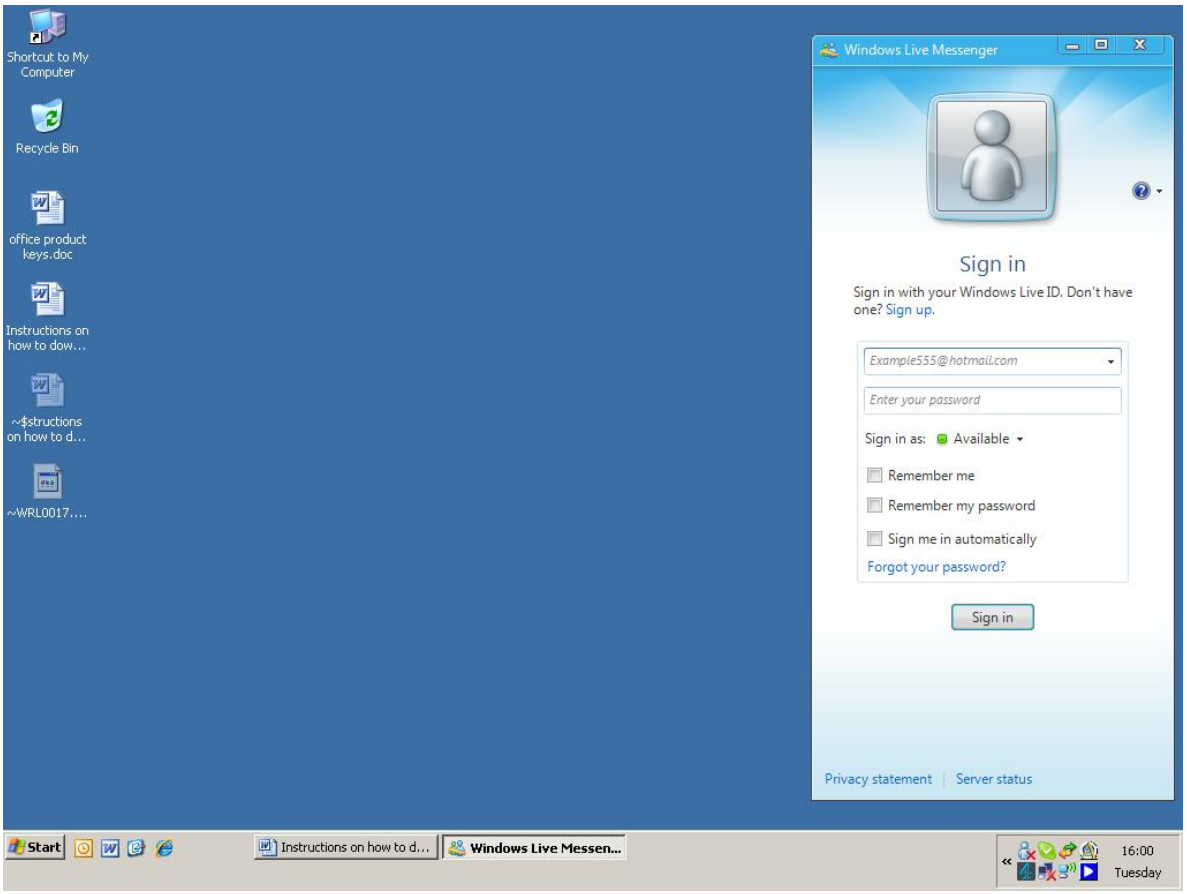
Untick the options to set as your search provide and to set as your home page unless you would like this to be the case.



Click close.


Instructions on how to download MSN messenger service.doc - Microsoft Word
Windows Live
Windows Live
Welcome to Windows Live!
Your new programs are in the Windows Live folder on the Start menu.
Do you have a Windows Live ID?
To get the most from your new programs, use your Windows Live ID to sign in.
If you use Hotmail, Messenger, or Xbox LIVE, you already have a Windows Live ID. If not, it only takes a minute to sign up.
Sign up
Close
Start
Instructions on how to d...
Windows Live
15:58
Tuesday

Type in the username and password to sign in (Gemma will give this to you through email prior to your arranged interview).



Appendix 6: Interview structure

At the start of the interview:

Ask the participant to confirm their ID code from the questionnaire (place of birth, birth year, number of siblings and number of children).

Type: “If you need to leave at any point (to get a drink etc) then please just type 'be right back' or 'brb' for short. Just so that I know you have left the computer.

I will start by asking quite a general question and then if I have any specific questions as we go through I'll ask”.

Check if the participant has any questions and if they are happy to start.

Main question:

Please can you tell me about your experience of the menopause / hysterectomy?

Sub questions:

Please can you tell me more about how it begun through to what it is like now?

How do you feel about your symptoms/health/body/appearance over the menopausal transition?

What would you recommend to others that are going through or will be going through the menopause / going to have a hysterectomy?

Prompts:

How did that make you feel?

How did you deal with that?

You mentioned....., please can you tell me more about that?

Things to say at the end:

Is there anything else you feel we have not discussed that you would like to add?

This interview has been very useful, thank you. If you think of anything else you would like to add then please feel free to email it to me and I'll add it in. I will send you a copy of the transcription over email with a few short questions asking you to evaluate the method of interview online. I hope that is OK?

If there is anything to clarify, please let me know. Thank you very much and enjoy the rest of your day/evening/weekend (make sure they log off OK before leaving).

Appendix 7: Information sheet, consent form and questionnaire

UNIVERSITY OF BIRMINGHAM

Information Sheet of FAQs

Women's experiences during the menopausal transition

and how this relates to health and perceptions of the self.

What is this research about?

The menopause represents an important transition in a woman's life as it can greatly affect health and well-being. Clearly, women are affected differently by the menopausal transition and we are interested in examining some of the psycho-social factors that might explain such differences. It appears that perceptions and feelings about the physical self can be important influences on behaviours that women choose to adopt and the well-being they experience during this phase in their lives. However, very little research has been conducted examining this question. Understanding more about the psycho-social factors that may help explain women's experiences can help healthcare professionals decide upon suitable strategies designed to assist women in coping with symptoms and maintaining levels of health and well-being at this important point in their lives.

Can I take part in this research?

You have been asked to participate in this study because you have indicated that you believe you are currently going through the menopausal transition. Even if your only symptom is that your periods have stopped, you still are a very valid part of this research. Women still count as going through the menopausal transition for 2 years after their periods have stopped if you are under 50 years old, or 1 year if you are 50 or above. You cannot take part if you are going through the menopause due to medical (i.e. radiation) or surgical (i.e. hysterectomy) reasons, only those going through the

menopausal transition naturally can participate.

What are you asking me to do?

We are asking you to fill out a questionnaire examining some of the above psycho-social factors. The questionnaire takes approximately 20 minutes to complete and you have the option of completing it by hand or online. If it is done by hand there is a FREEPOST address at the end of the questionnaire for you to send it back to us for FREE.

Please read through this information sheet and ask **any** further questions you have regarding the study. If you are happy with the information, you can then complete the questionnaire either online or on a hard copy (please email / write to Gemma Pearce for this).

Website: http://sites.google.com/site/menopausegroup/

Online survey link:

http://www.surveymonkey.com/s.aspx?sm=fybA0ikfY7JKwjblAYmByw_3d_3d

What happens to the information I give in the questionnaires?

Once a questionnaire and consent form has been received by the research team, these will then be separated into different locked filing cabinets and the data will therefore be confidential from this point onwards. Your identity and data will remain confidential and an ID code will be used in order for the researchers to match up the questionnaire data from the two questionnaire completions. The locked filing cabinets will be at the School of Sport and Exercise Sciences at the University of Birmingham, and code identification information will be stored on the researcher's password protected PC. Thus, your identity is not anonymous, but only the researchers on this project will be able to identify your individual responses. When the findings are distributed to the public and professionals in related fields, your identity will be anonymous as only a summary of the results will be reported. In line with the University's Code of Conduct

for Research, data will be retained intact for a period of five years from the date of any publication which is based upon it.

You have the right to withdraw from this study at any time without needing to give a reason. There will be no negative consequences. Your data will not be included in the study and you can take your data or it will be destroyed by the researchers.

At this stage, please ask any further questions you have about this research project.

Please retain this information sheet in case you have any questions later on. You may contact the researchers at any time using the following contact details. In the first instance, please email Gemma Pearce. (These are NOT the freepost addresses).

Gemma Pearce, MSc
Sport and Exercise Sciences
University of Birmingham
Edgbaston
Birmingham
B15 2TT

Dr. Cecilie Thøgersen-Ntoumani
Sport and Exercise Sciences
University of Birmingham
Edgbaston
Birmingham
B15 2TT

In the event that you wish to seek advice and/or information regarding the menopause as a result of the issues raised during the study, here are some recommended sources: your G.P., societies, plus there are informational books sold in most main book stores.

British Menopause Society
Tel: + 44 (0) 1628 890199
http://www.thebms.org.uk/

International Menopause Society
Tel: +44 15242 21190
http://www.imsociety.org/index.html

The Menopause Exchange
0208 420 7245
www.menopause-exchange.co.uk

Consent form (For you to hand in to researcher.)

The consent form will be separated from the questionnaire by the researcher.

Study title: Women's experiences during the menopausal transition and how this relates to health and perceptions of the self.

Please read the following statements and tick the box if you agree:

I have read and understand the purpose of the study. ☐

I understand what is expected of me during the study. ☐

I agree to the researchers posting a similar questionnaire to me in three months' time. ☐

I understand that my identity and data **will** remain confidential. ☐

I understand that my identity **will not** remain anonymous to the researchers working within the research project. ☐

I understand that my identity will not be revealed when the findings are distributed to the public and professionals in related fields, your identity will be anonymous as only a summary of the results will be reported. ☐

I understand that I have the right to withdraw from this study **at any time** without needing to give a reason and without negative consequence. ☐

Please ask any further questions you have about this research project at any time.

Please print your name, sign and date below if you give your consent to participate in this study according to the conditions stated above.

Print name:

Sign:

Date:

Please enter your ID code for this study below (this will remain the same throughout each stage of the study). The ID code needs to be devised using your place of birth, birth year, number of siblings and number of children e.g. for a female born in Hall Green in 1952, who is an only child and has no children, the code would be: hallgreen195200

ID code:
……

So that we can send the second questionnaire to you in 3 months time, please fill out your contact details below (these details will be kept separate from your questionnaire and your details will remain confidential and will NOT be passed on to any other parties).

Name and address (including postcode):

……

……

……

Email address:
……

Telephone number (mobile number is preferable)…….

There will be an interview stage of this study, where we would like to chat on a one-to-one basis to a range of women going through different experiences of the menopausal transition. We hope to contact a selection of women that filled out questionnaires with more information regarding this part of the study to ask them if they would like to volunteer to take part in the interview stage of the study (which will be one interview that we expect will take no more than one hour).

Please tick the box if you would NOT like to be contacted for this. ❒

NB. If you wish to take part in the interview, but travelling to the University is not easily accessible, an alternative can be arranged to suit your needs.

Questionnaire (to be handed in to researcher)

(N.B. This was originally distributed in portrait format but has been changed to landscape for publication purposes)

SECTION 1: ABOUT YOU

Please enter your ID code for this study (devised using your place and year of birth, number of siblings and children)

e.g. for a female born in Hall Green in 1952, who is an only child and has no children, the code would be: hallgreen195200

ID code: ……

To which ethnic group do you consider yourself to belong?

❒ Asian	❒ Black	❒ Chinese	❒ Mixed	❒ White	❒ Other

If other, please specify ……..

Please enter your current weight? ……kg OR …….st/lbs OR ……..lbs

Please enter your current height? .....cm OR .....m/cm OR .....ft/in

On average, how many cigarettes do you smoke per week?

❒ None	❒ 1-10	❒ 11-20	❒ 21-30	❒ 31-40	❒ 41-50	❒ 51+

On average, how many units of alcohol do you consume per week?

❒ None	❒ 1-3	❒ 4-6	❒ 7-9	❒ 10-15	❒ 15-20	❒ 20+

What is your sexual orientation?

❒ Heterosexual	❒ Homosexual	❒ Bisexual	❒ Rather not say

What is your current relationship status?

❒ Single	❒ Married	❒Long term relationship	❒ Rather not say

Are you in employment?

❒ Yes, full time	❒ Yes, part time	❒No

If yes, please specify your main occupation…….

If no, please specify reason…….

Please specify how many children you have and their ages…….

Please specify how many grandchildren you have and their ages…….

SECTION 2: YOU AND YOUR MENOPAUSE

Do you currently take Hormone Replacement Therapy (HRT)? ❒ Yes ❒ No

If yes, please state how long you have been taking HRT…….....

Have you previously taken Hormone Replacement Therapy (HRT) but do not anymore? ❒ Yes ❒ No

If yes, please state how long you took HRT for…….....

If yes, please state the reason you stopped taking HRT…….....

For how long have you been experiencing symptoms that you believe are associated with the menopausal transition?

❒ 1-5 months	❒ 6-11 months	❒ 12-17 months	❒ 18-23 months	❒ 1-2 years
❒ 3-5 years	❒ 6-9 years	❒ 10+ years	❒ I have not experienced any	❒ I am not sure

Has your menstrual cycle been completely absent for more than 12 months? ❒ Yes ❒ No

If yes, please state how long it has stopped for?

❒ 12-17 months	❒ 18-23 months	❒ 2-3 years	❒ 4-5 years	❒ 5+ years

How often have you had hot flushes in the past week?

Please estimate: _____ each day, or _____ each week.

If you have night sweats, please estimate how often they woke you up, in the past week _____ times each

night, or _____ times each week.

Please indicate how your flushes/ sweats have been during the past week:

1=not at all, 10=very much

	1	2	3	4	5	6	7	8	9	10
To what extent do you regard your flushes/sweats as a problem?	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑
How distressed do you feel about your hot flushes?	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑
How much do your hot flushes interfere with your daily routine?	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑
How well are you coping with them?	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑
How much control do you feel you have over your hot flushes?	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑
How much has your sleep been disrupted by night sweats?	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑

In general, would you say your physical health is:

❑ Poor	❑ Fair	❑ Good	❑ Very good	❑ Excellent

Are there any additional comments that you think may be useful regarding your menopausal experience?

……

……

……

……

……

SECTION 3: PHYSICAL ACTIVITY

Employment (only answer this section if you are currently in employment)

Please rate the following questions from **1=Never, 2=Seldom, 3=Sometimes, 4=Often and 5=Very often.**

	1	2	3	4	5		1	2	3	4	5
At work I sit.	❑	❑	❑	❑	❑	At work I lift heavy loads.	❑	❑	❑	❑	❑
At work I stand.	❑	❑	❑	❑	❑	After working I am tired.	❑	❑	❑	❑	❑
At work I walk.	❑	❑	❑	❑	❑	At work I sweat.	❑	❑	❑	❑	❑

In comparison with others of my own age I think my work is physically

❑ Much heavier	❑ Heavier	❑ As heavy	❑ Lighter	❑ Much lighter

Structured sport and exercise activities (e.g., sports such as tennis, football, badminton etc. OR exercise such as jogging, running, cycling, aerobics class or gymnasium activities. DO NOT include walking)

Do you participate in sport or exercise activity? ❑ Yes ❑ No

If yes:

What is your main sport or exercise activity?.....

How many hours per week do you participate in that activity?

❒ Less than 1	❒ 1-2	❒ 2-3	❒ 3-4	❒ More than 4

How many months a year?

❒ Less than 1	❒ 1-3	❒ 4-6	❒ 7-9	❒ More than 9

If you participate in a second sport or exercise activity, what is it?.....

How many hours per week do you participate in that activity?

❒ Less than 1	❒ 1-2	❒ 2-3	❒ 3-4	❒ More than 4

How many months a year?

❒ Less than 1	❒ 1-3	❒ 4-6	❒ 7-9	❒ More than 9

If you participate in a third sport or exercise activity, what is it?.....

How many hours per week do you participate in that activity?

❒ Less than 1	❒ 1-2	❒ 2-3	❒ 3-4	❒ More than 4

How many months a year?

❒ Less than 1	❒ 1-3	❒ 4-6	❒ 7-9	❒ More than 9

Leisure time activities

In comparison with many others my own age I think my physical activity during leisure time is:

❒ Much more	❒ More	❒ The same	❒ Less	❒ Much less

How many minutes do you walk and/or cycle per day to and from work, school, and shopping?

❒ Less than 5	❒ 5-15	❒ 16-30	❒ 31-45	❒ More than 45

Please answer the following questions, **1=Never, 2=Seldom, 3=Sometimes, 4=Often and 5=Very often.**

	1	2	3	4	5		1	2	3	4	5
During leisure time I sweat.	❑	❑	❑	❑	❑	During leisure time I watch television.	❑	❑	❑	❑	❑
During leisure time I participate in sport and/or exercise.	❑	❑	❑	❑	❑	During leisure time I walk.	❑	❑	❑	❑	❑

SECTION 4: FEELINGS ABOUT YOURSELF

Below is a list of statements dealing with your general feelings about yourself. Please tick your level of agreement with each statement below, **1=Strongly agree, 2=Agree, 3=Disagree, 4=Strongly disagree.**

	1	2	3	4		1	2	3	4
On the whole, I am satisfied with myself.	❑	❑	❑	❑	I certainly feel useless at times.	❑	❑	❑	❑
At times, I think I am no good at all.	❑	❑	❑	❑	I feel that I'm a person of worth, at least on an equal plane with others.	❑	❑	❑	❑
I feel that I have a number of good qualities.	❑	❑	❑	❑	I wish I could have more respect for myself.	❑	❑	❑	❑
I am able to do things as well as most other people.	❑	❑	❑	❑	All in all, I am inclined to feel that I am a failure.	❑	❑	❑	❑
I feel I do not have much to be proud of.	❑	❑	❑	❑	I take a positive attitude toward myself.	❑	❑	❑	❑

Below are five statements with which you may agree or disagree. **1=Strongly Disagree, 2=Disagree, 3=Slightly Disagree, 4=Neither Agree or Disagree, 5=Slightly Agree, 6=Agree, 7=Strongly Agree.**

	1	2	3	4	5	6	7		1	2	3	4	5	6	7
In most ways my life is close to my ideal.	❑	❑	❑	❑	❑	❑	❑	So far I have gotten the important things I want in life.	❑	❑	❑	❑	❑	❑	❑
The conditions of my life are excellent.	❑	❑	❑	❑	❑	❑	❑	If I could live my life over, I would change almost nothing.	❑	❑	❑	❑	❑	❑	❑
I am satisfied with life.	❑	❑	❑	❑	❑	❑	❑								

Please respond to each of the following statements in terms of how you are feeling right now. **1=Not at all true, 4=Somewhat true, 7=Very true.**

	1	2	3	4	5	6	7		1	2	3	4	5	6	7
At this moment, I feel alive and vital.	❑	❑	❑	❑	❑	❑	❑	I am looking forward to each new day.	❑	❑	❑	❑	❑	❑	❑
Currently I feel so alive I just want to burst.	❑	❑	❑	❑	❑	❑	❑	At this moment, I feel alert and awake.	❑	❑	❑	❑	❑	❑	❑
At this time, I have energy and spirit.	❑	❑	❑	❑	❑	❑	❑	I feel energized right now.	❑	❑	❑	❑	❑	❑	❑

SECTION 5: HEALTH

Please indicate how you are feeling now, or how you have been feeling THE LAST FEW DAYS.

1=Yes, definitely, 2=Yes, sometimes, 3=No, not much and 4=No, not at all.

	1	2	3	4		1	2	3	4
I wake early and then sleep badly for the rest of the night	❑	❑	❑	❑	I have hot flushes	❑	❑	❑	❑
I get very frightened or panic feelings for apparently no reason at all	❑	❑	❑	❑	I am more clumsy than usual	❑	❑	❑	❑
I feel miserable and sad	❑	❑	❑	❑	I feel rather lively and excitable	❑	❑	❑	❑
I feel anxious when I go out of the house on my own	❑	❑	❑	❑	I have abdominal cramps or discomfort	❑	❑	❑	❑
I have lost interest in things	❑	❑	❑	❑	I feel sick or nauseous	❑	❑	❑	❑
I get palpitations or a sensation of "butterflies" in my stomach or chest	❑	❑	❑	❑	I have lost interest in sexual activity	❑	❑	❑	❑
I still enjoy the things I used to	❑	❑	❑	❑	I have feelings of well-being	❑	❑	❑	❑
I feel life is not worth living	❑	❑	❑	❑	I have heavy periods (please omit if no periods at all)	❑	❑	❑	❑

I feel tense or "wound up"	❑	❑	❑	❑	I suffer from night sweats	❑	❑	❑	❑
I have a good appetite	❑	❑	❑	❑	My stomach feels bloated	❑	❑	❑	❑
I am restless and can't keep still	❑	❑	❑	❑	I have difficulty in getting off to sleep	❑	❑	❑	❑
I am more irritable than usual	❑	❑	❑	❑	I often notice pins and needles in my hands and feet	❑	❑	❑	❑
I worry about growing old	❑	❑	❑	❑	I am satisfied with my current sexual relationship (please omit if not sexually active)	❑	❑	❑	❑
I have headaches	❑	❑	❑	❑	I feel physically attractive	❑	❑	❑	❑
I feel more tired than usual	❑	❑	❑	❑	I have difficulty in concentrating	❑	❑	❑	❑
I have dizzy spells	❑	❑	❑	❑	As a result of vaginal dryness sexual intercourse has become uncomfortable (please omit if not sexually active)	❑	❑	❑	❑
My breasts feel tender or uncomfortable	❑	❑	❑	❑	I need to pass urine/water more frequently than usual	❑	❑	❑	❑
I suffer from backache or pain in my limbs	❑	❑	❑	❑	My memory is poor	❑	❑	❑	❑

Is it very difficult for you to cope with any of the above symptoms? ❑ Yes ❑ No

If yes, please state which ones……...

……...

Below is a list of statements dealing with your general feelings about yourself, **1=Not a lot, 2=A little, 3=Somewhat and 4=A lot.** How much do you worry about each of the following?

	1	2	3	4		1	2	3	4
Being too old to have children.	❑	❑	❑	❑	Having more illness as you get older	❑	❑	❑	❑
Being less attractive as a woman	❑	❑	❑	❑					

Please indicate the extent to which each statement pertains to you personally, **1=Definitely agree, 2=Mostly agree, 3=Neither agree nor disagree, 4=Mostly disagree and 5=Definitely disagree.**

	1	2	3	4	5		1	2	3	4	5
My body is sexually appealing.	❑	❑	❑	❑	❑	I like the way my clothes fit me.	❑	❑	❑	❑	❑
I like my looks just the way they are.	❑	❑	❑	❑	❑	I dislike my physique.	❑	❑	❑	❑	❑
Most people would consider me good-looking.	❑	❑	❑	❑	❑	I am physically unattractive.	❑	❑	❑	❑	❑
I like the way I look without my clothes on.	❑	❑	❑	❑	❑						

Below is a list of statements dealing with your general feelings about yourself. **1=Strongly agree, 2=Agree, 3=Agree somewhat, 4=Disagree somewhat, 5=Disagree and 6=Strongly disagree.**

	1	2	3	4	5	6		1	2	3	4	5	6
When I think I look attractive, I feel good about myself.	❑	❑	❑	❑	❑	❑	My sense of self-worth suffers whenever I think I don't look good.	❑	❑	❑	❑	❑	❑
My self-esteem is unrelated to how I feel about the way my body looks.	❑	❑	❑	❑	❑	❑	My self-esteem does not depend on whether or not I feel attractive.	❑	❑	❑	❑	❑	❑
My self-esteem is influenced by how attractive I think my face or facial features are.	❑	❑	❑	❑	❑	❑							

Comments: Is there any additional information that you think may be useful for this study?

(Please feel free to use an extra sheet of paper)

……..

……..

……..

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……..

Thank you very much for your participation!

POST: PLEASE PUT THE CONSENT FORM AND THE COMPLETED QUESTIONNAIRE IN AN ENVELOPE WITH THE FREEPOST ADDRESS.

BM2843

Dr. Cecilie Thøgersen-Ntoumani

School of Sport & Exercise Sciences

The University of Birmingham

FREEPOST

Birmingham

B15 1BR

EMAIL: PLEASE SAVE YOUR QUESTIONNAIRE AND EMAIL IT TO

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