THE UNIVERSITY OF HULL

Sub-fertility: The expectations and perceptions of couple members of medical consultation.

being a Thesis submitted for the degree of Doctor of Clinical Psychology

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By

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Overview

The portfolio has three parts.

The first part is a systematic literature review, in which empirical literature relating to the relationship between couple members' coping and intra-couple concordance upon fertility problem related stress is reviewed. It aims to present an understanding of how couple members cope with primary sub-fertility and how concordance and discordance of coping strategies between couple members can influence the level of distress experienced.

Part two is an empirical paper, which investigates the expectations and perceptions of sub-fertile couple members of medical consultation. To achieve this couples attending a sub-fertility clinic for a consultation with the Consultant Obstetrician and Gynaecologist completed a questionnaire prior to entering the consultation to assess their expectations and two questionnaires immediately following the consultation to assess the extent to which couple members considered their expectations to have been met and their perceptions of the amount of interaction between themselves and the Consultant and their partner and the Consultant during the medical consultation.

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Part One

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Sub-fertile couple members' coping strategies, intra-couple coping and fertility problem stress: A systematic literature review.

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This paper is written in the format ready for submission to the Journal of Social Science and Medicine. Please see Appendix C for the Guidelines for Authors

Abstract

Sub-fertility represents a major stress for couples requiring management by the partners. The interaction between couple member's strategies may influence the levels of sub-fertility related stress experienced by both partners, as such an understanding of sub-fertility as a couple level stressor is required. This review integrates existing data regarding sub-fertile couple members' individual coping and the influence of intra-couple coping concordance on fertility problem stress. Eleven publications, comprising nine quantitative and two qualitative studies, were identified using a list of selection criteria applied to the results of defined searches in Psycinfo, Web of Knowledge and CINAHL and manual searches of articles' bibliographies. Females were found to experience greater distress and utilise more coping strategies than males, which may be influenced by the importance of motherhood to the female gender role. Couple members' coping was found to influence their partner's distress levels with the extent of intra-couple coping concordance and discordance for several coping strategies being found to impact upon partners' distress levels. The effect of intra-couple coping concordance and discordance upon partners' availability to support each other is considered. Further research specifically focusing upon the measurement of intra-couple coping of concordance/ discordance and the impact upon partners' sub-fertility related distress within couples is required, as this is currently an under researched area, with little consensus about which coping strategies are investigated and, subsequently, the effects of intra-couple coping concordance.

Sub-fertile couple members' coping strategies, intra-couple coping and fertility problem stress: A systematic literature review.

Introduction

Achieving parenthood is considered to be a major life goal for adults. This is particularly so in pronatalistic[1] countries where it holds significant personal and social achievement value (van Rooij, van Balen, & Hermanns, 2009). Couples rarely consider the possibility that they may experience difficulties conceiving (Anderson, Sharpe, Rattray, & Irvine, 2003), however, a growing proportion are faced with difficulties. Sub-fertility, defined as the inability to conceive after 12-months of regular unprotected sexual intercourse (Cousineau & Domar, 2007), is thought to affect 15-25% of all couples attempting conception (Tierney, McPhee, & Papadakis, 1999), many of whom will be trying for the first time (Anderson, et al., 2003). Due to the unexpected nature of sub-fertility and individuals' lack of knowledge about it, stress is experienced within interpersonal relationships and functioning in other life domains (Peterson, Pirritano, Christensen, & Schmidt, 2008).

Sub-fertility research has previously concentrated on the experience of females, who are suggested to find it highly distressing, perceiving it as a threat to their identity (Berg, Wilson, & Weingartner, 1991). Females experience sub-fertility related stress in multiple domains of their life including marital and social relationships (Greil, 1997) and life satisfaction (Anderson, et al., 2003). In comparison, males are suggested to experience it within their home life (Abbey, Andrews, & Halman, 1991), marital relationships and levels of personal distress (Peterson, et al., 2009).

While sub-fertility has effects at an individual level, it is experienced within a couple (Peterson, Newton, Rosen, & Schulman, 2006), as both members are equally

[1] An attitude that encourages childbearing.

unable to achieve their goal of parenthood (Stanton, 1992). The demands of sub-fertility upon individuals are therefore negotiated within the context of the couple's relationship. As a couple, partners negotiate the emotional, physical and relational effects of sub-fertility between them, as well as beliefs about the importance of parenting and decisions about medical investigation and treatments (Jordan & Revenson, 1999). Couple members are thought to rely exclusively upon each other for support in managing sub-fertility related stress, due to feeling unable to confide in external parties because of stigma (Glover, McLellan, & Weaver, 2009; van Rooij, et al., 2009). Large demands are therefore placed upon the couple's relationship as each partner is experiencing and managing their own levels of stress whilst also attempting to provide support for their partner (Levin, Sher, & Theodos, 1997). The demands upon partners may be intensified in couples where members are experiencing different levels of sub-fertility related distress and are at different stages of coping (Levin, et al., 1997). Sub-fertility places a large amount of stress on couples and it's management can be seen to have enduring effects upon their relationship and each partner's well-being (Jordan & Revenson, 1999).

In order to manage the "emotional rollercoaster" (Whiteford & Gonzalez, 1995) presented by sub-fertility, couple members engage in a variety of coping strategies. Coping, defined as one's "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources" (Lazarus & Folkman, 1984, p.141), has been categorised into three main types: problem-focused, emotion-focused, and meaning-based coping (Folkman, 1997). The adaptiveness of the different types has been debated, with coping efficacy considered to be influenced by correspondence between the demands of the stressor and the strategies implemented to manage it (Lazarus & Folkman, 1984). Problem-focused strategies are considered efficacious in situations

where the stressor is able to be resolved whereas emotion-focused and meaning-based coping are considered efficacious in situations where the stressor cannot be resolved and acceptance and emotional adjustment must occur (Schmidt, Holstein, Christensen, & Boivin, 2005).

Gender differences in the employment of coping strategies has been proposed within sub-fertility (Jordan & Revenson, 1999). Females have been reported to employ emotion-focused strategies to a greater extent than males who are reported to use more problem-focused coping (Jordan & Revenson, 1999).

Whilst the way an individual copes is important to their adjustment this is not sufficient to account for all the adjustment shown. Partners' methods of coping have been found to influence each other (Berghuis & Stanton, 2002), highlighting the reciprocal nature of managing sub-fertility within a couple (Levin, et al., 1997; Peterson, et al., 2008).

Research within sub-fertility has suggested that the extent of intra-couple coping concordance and discordance influences partners' experience of stress (Levin, et al., 1997; Peterson, et al., 2006). Concordance is the use of the same form of coping to the same extent between partners, whereas discordance is the employment of different strategies or the use of the same strategy to different degrees by partners (Peterson, et al., 2008). The extent of intra-couple coping concordance and discordance has been found to influence sub-fertile couple members' personal, marital and social distress levels (Levin, et al., 1997; Peterson, et al., 2006), suggesting complexity in the management of sub-fertility within a couple and an influence of coping at both the individual and couple levels.

Recent studies of sub-fertile couples have focused on the influence of individual partner's coping and intra-couple coping concordance upon fertility problem stress. This review aims to integrate the research literature and answer the following questions (i)

How do couple members cope with primary sub-fertility? (ii) How do these coping strategies influence the individual's ability to manage fertility problem stress? (iii) In a couple, does one partner's coping strategy impact on their partner's coping and level of sub-fertility related distress?

Method

Sources and search strategy

A preliminary scoping search was conducted in order to identify relevant databases and to test the search terms and strategy. Advice was further sought from J. Boivin and C. Dunkel-Schetter who are published experts in the fields of sub-fertility and coping.

A number of electronic databases to be searched for relevant journal articles were selected: Psycinfo, Web of Science, and CINAHL. Coping and sub-fertility are topics that are researched within both the fields of medicine and psychology, as such the databases to be searched were selected to cover both of these fields.

Initially the terms cop*, sub-fertil* and couples were entered into the databases as part of the scoping search. Further search terms were selected from the keywords that were stated most often by the articles generated during the scoping search. These were further refined to those terms that produced articles relevant to the question under review and which met the inclusion criteria. The final list of search terms used is shown in Table 1.

	Search terms
Sub-fertility	Sub-fertil*
	Infertil*
	Involuntary childlessness
Couples	Couples
	Spouses
	Dyads
	Partners
	(men AND women)
	(males AND females)
Coping	Cop*
	Cop* behav*
	Cop* strateg*
	Adjust*

Table 1: Search terms used for database searches.

All possible combinations of these terms were systematically entered into each database to retrieve relevant articles. Articles were identified from their titles and the selection criteria (Table 2) were applied to the abstract, where possible. Full copies of filtered articles were obtained so the selection criteria could be applied fully and the article's relevancy assessed.

Additionally manual searches of bibliographies from articles included within the review were conducted to identify further articles of relevance. The abstracts of these articles were assessed and copies of the full text obtained in relevant cases.

Study selection criteria

The selection criteria (Table 2) were developed and refined from reading abstracts retrieved from the scoping search. The rationale for the inclusion and exclusion criteria can be found in Appendix D. Studies had to meet all inclusion and no exclusion criteria to be included in the review.

Studies were only included if they used: ▪ "Inability to conceive after 12-months of regular unprotected sexual intercourse" (Cousineau & Domar, 2007) as the criterion for primary sub-fertility. ▪ Heterosexual couples with primary sub-fertility, from different diagnoses, who were at different stages of treatment. ▪ Assessments of both male and female coping strategies and fertility problem stress. Studies were excluded if they were: ▪ Not printed in English. ▪ Literature reviews, meta-analyses, case studies, dissertations and theses.

Table 2: Selection criteria for studies included within the review.

Study quality assessment

Eleven studies identified for inclusion were assessed for quality using checklists developed by the reviewer. These were developed using questions from quality assessment measures by Downs & Black (1998) and the National Institute for Health and Clinical Excellence (NICE) (2007; 2009). The review does not investigate interventions or clinical trials thus these questions were excluded. Questions assessing

the quality of general aspects of research studies were selected to form the checklists, as these reflected the types of studies generated by the database searches.

Two checklists were developed to assess the quality of qualitative and quantitative studies separately (Appendix E).

Checklist items were recorded as either met ("yes") and unmet ("no") or uncertain ("unsure") for each study, corresponding to item scores of 1 and 0, respectively (Downs & Black, 1998). Overall quality ratings were determined by summing the number of "yes" responses, with a total of 18 obtainable upon both checklists. Studies were not excluded from the review based upon quality ratings as there was not a big literature base from which studies could be drawn from to answer the specific literature review questions whilst meeting all of the inclusion criteria. The inclusion of studies of varying quality enabled a critique of the research literature available to be conducted and recommendations for future research to be made.

Data extraction

Data were extracted from studies using pro-formas designed specifically for recording data for this review. Separate pro-formas for qualitative and quantitative studies were developed (Appendix F).

Data synthesis

Extracted data were collated and reported qualitatively within the review, enabling findings from the studies to be described and important findings with regards to couple member coping, intra-couple coping and fertility problem stress to be assimilated. Frequency counts were also used to quantitatively report findings.

Details of included and excluded studies

Eleven studies satisfied all selection criteria and were thus included within the review. Ten were obtained from database searches and one from the bibliographies of these studies. Study selection methodology is depicted in Figure 1.

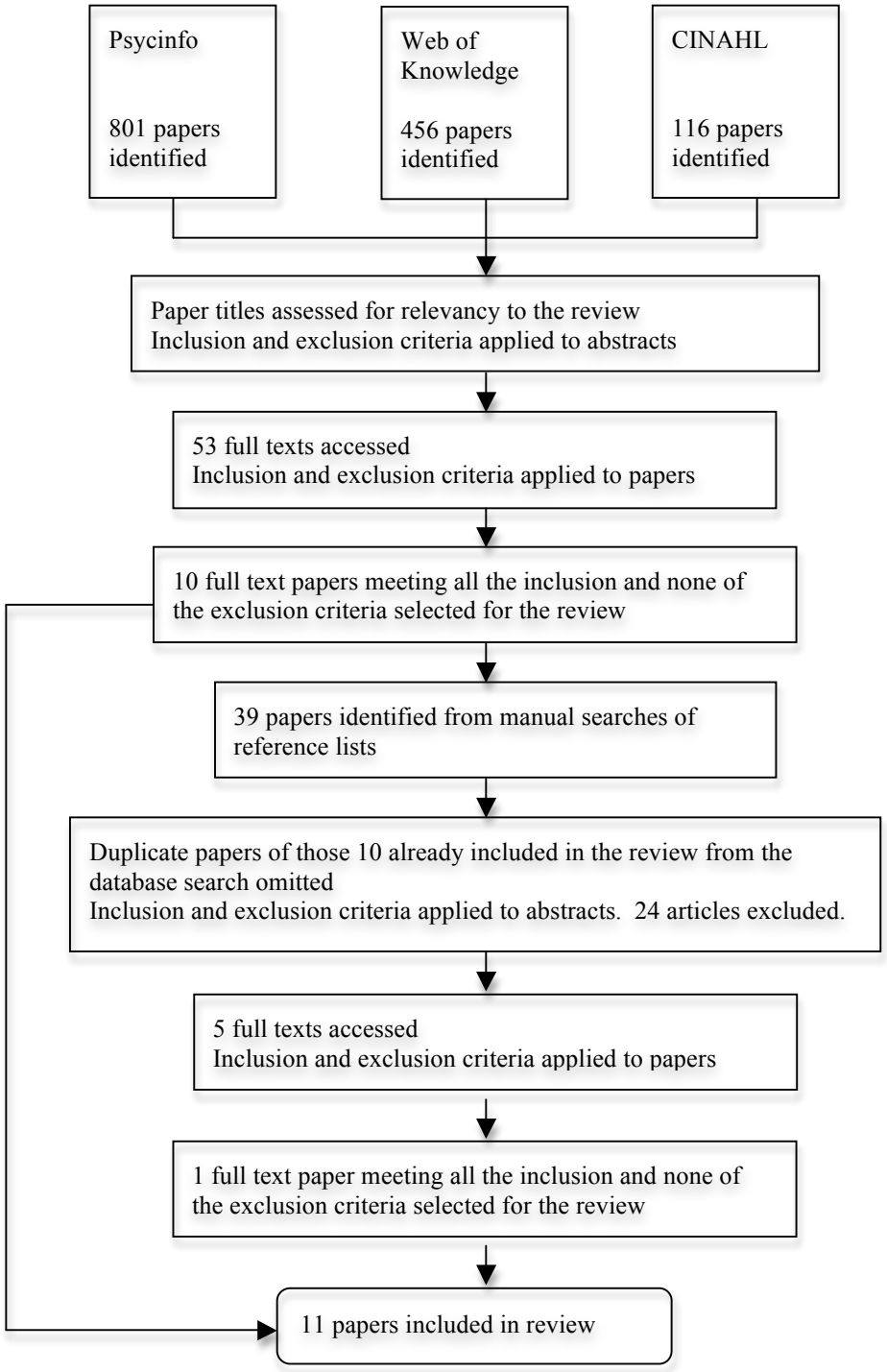

Figure 1: Study selection methodology.

Results

Tables 5 and 6 summarise the characteristics and key findings of the eleven studies. Nine of the studies found employed of a quantitative methodology whilst the remaining two utilised a qualitative methodology. The data collected from these two types of study have been addressed separately.

Quantitative studies

Individual partner's coping

Gender differences in the employment of coping strategies between sub-fertile couple members were found within two studies (Abbey, et al., 1991; Stanton, Tennen, Affleck, & Mendola, 1992). Males were found to use the coping behaviours of distancing, self-controlling and planful-problem solving more than females who used social support and avoidance (Stanton, et al. 1992). Further to this, Abbey, et al. (1991) found that only female partners used a problem-solving coping style, whilst both males and females used escape coping to manage sub-fertility. Differences in the extent of employment of coping strategies were also found between partners, with females being found to use more strategies to cope with sub-fertility than males (Stanton, et al., 1992).

The relationship between the employment of the coping strategies and distress levels were found to differ between the genders at an individual level (Table 3). For example, meaning-based coping was found to be of most benefit to lowering the sub-fertility related distress levels of females (Peterson, et al. 2008; Peterson, et al. 2009). However, this style of coping was found to result in raised social distress for males (Peterson, et al. 2009).

Differences in the employment of coping strategies and distress levels were also evident between studies (Peterson, et al. 2008; Peterson, et al. 2009) (Table 3).

Coping strategy	Peterson, et al. (2008)	Peterson, et al. (2009)
Active-confronting	Males- high social distress Females- high personal and marital distress	Males – high marital distress
Passive-avoidance	Males – high personal, marital and social distress Females- high personal distress	Males- high marital distress
Meaning-based coping	Females- low personal, marital and social distress	Males- high social distress Females- low personal and marital distress

Table 3: Coping strategies and distress levels for sub-fertile couple members.

Partner's coping

Male and female couple members employ different coping strategies to different extents in response to sub-fertility. Significant relationships were found between the use of self-controlling (Stanton, et al., 1992), active-confronting and meaning-based (Peterson, et al., 2009; Peterson, et al., 2008) coping by female couple members and the sub-fertility related distress experienced by their male partners. Suggesting an interaction between an individual's coping and their partner's adjustment to sub-fertility, particularly for the adjustment of male couple members.

However, differences in the influence of active-avoidance and passive-avoidance were found between the studies. Peterson, et al. (2009) found active-avoidance coping at 5-year follow-up to be related to increased social and personal distress in both genders and the use of passive-avoidance by male couple members to

increase their partner's marital distress. Peterson, et al. (2008) however found no differences in the effects of active or passive-avoidance upon partner distress.

Effects of intra-couple coping concordance

Relationships between an individual's coping strategy and their partner's distress have been found, however these examine only one partner's coping upon the other's distress. An influence of intra-couple coping concordance and discordance upon partners' distress was found within some studies (Levin, et al., 1997; Peterson, et al., 2006; Peterson, et al., 2008) (Table 4).

Form of coping	Extent of coping concordance/ discordance			
	High/High	Low/Low	F-Low/M-High	F-High/M-Low
Emotion-oriented	Males: high psychological distress.	Females: high marital satisfaction.	Females: low marital satisfaction and males high psychological distress.	
Task-oriented		Low marital satisfaction for both partners.		
Accepting responsibility	High infertility related stress for both partners.	Low infertility related stress and depression and increased marital adjustment.		
Distancing			High infertility related stress and depression and low marital adjustment.	

Self-controlling			High infertility related stress and depression and low marital adjustment.
Active-Avoidance	High personal and marital distress.		
Active-confronting		Males: low marital distress.	
Meaning-based		Males: high marital distress.	Males: low marital distress.

Table 4: Effects of intra-couple coping concordance and discordance for sub-fertile couple members.

Intra-couple concordance for emotion-oriented coping (Levin, et al., 1997) and accepting responsibility (Peterson, et al., 2006) were found to influence partners' distress levels (Table 4). Both studies found different consequences to high and low levels of concordance for the strategies. High levels of coping concordance in both strategies led to elevated sub-fertility related distress for both genders whereas low

intra-couple concordance produced low marital stress (Levin, et al., 1997; Peterson, et al., 2006). Peterson, et al. (2006) further found low concordance for accepting responsibility to be beneficial in reducing sub-fertility related stress and depression.

Further to the findings of coping concordance between partners, patterns of intra-couple coping discordance were also found to influence partners' sub-fertility related distress (Table 4). Levin, et al. (1997) and Peterson, et al. (2006) found a relationship between partners' distress and couples where males used high, and females low, levels of a coping strategy (M-high/F-low). Levin, et al. (1997) found that M-high/F-low emotion-oriented coping discordance increased psychological distress for males and lowered marital satisfaction for females. Similarly, Peterson, et al. (2006) found high fertility related stress and depression and low marital adjustment for couples where there was a M-high/F-low discordant pattern for the use of distancing coping.

The inverse of this pattern of discordance, high female and low male coping usage (F-high/M-low) was found to influence partner's distress for self-controlling (Peterson, et al., 2006) and meaning-based (Peterson, et al., 2008) coping. F-high/M-low self-controlling discordance increased partners' fertility problem stress and depression and decreased marital satisfaction levels (Peterson, et al., 2006). Females' high usage of meaning-based coping lowered their partner's marital satisfaction (Peterson, et al., 2008).

Despite the influence found of intra-couple coping concordance and discordance upon partners' distress, only three studies (Levin, et al., 1997; Peterson, et al., 2006; Peterson, et al., 2008) assessed it. This hinders further development of the understanding of the reciprocal influence and underlying processes.

Research to further identify and provide confirmatory and/or disconfirmatory evidence for the impact of intra-couple coping concordance and discordance upon partners' sub-fertility related distress is warranted, as this is currently an under-

researched area. Future research would benefit from the use of a single measure of coping strategies within sub-fertility, used across a number of studies, to provide a sizable evidence base for the results found, as the investigation of intra-couple coping within sub-fertile couples currently has little consensus about the coping strategies investigated, with different measures employed between studies. This subsequently produces varied results about the effects of the coping concordance and discordance upon partners' distress levels.

Author and date	Study design	Number of participants	Fertility problem stress factors	Coping factors	Main findings
Kraaij, Garnefski, & Vlietstra (2008)	Longitudinal	99 people	Depression	Cognitive coping: • self-blame • acceptance • rumination • positive refocusing • refocus on planning • positive reappraisal • putting into perspective • catastrophizing • other-blame	Self-blame, rumination, and catastrophizing correlated depression both T1/T2. Acceptance, positive refocusing, planning and other blame correlated depression T1.
Peterson, et al. (2009)	Longitudinal	834 women and 647 men at 5-year follow up.	Fertility problem stress: personal, social, marital and overall.	i) active avoidance ii) active confronting iii) passive avoidance iv) meaning based coping	Significant gender differences personal and social distress- women higher scores. *Active avoidance coping* Greater use related greater personal, marital and social distress both genders. Significant partner effects for both genders personal and social distress. *Active-confronting coping* Men- significant positive individual and partner effect on marital distress. *Passive-avoidance coping* Significant individual effect both genders and significant partner effect women on personal distress. Significant individual effect men and partner effect women for marital distress.

						Meaning-based coping Significant negative effect personal distress for women. Significant individual effect women and significant partner effect men on marital distress. Significant positive effect men's social distress.
Peterson, et al. (2008)	Cross-sectional	1169 women and 1081 men.	Fertility problem stress: personal, social, marital and overall.	i) ii) iii) iv)	Active-avoidance strategies Active-confronting strategies Passive-avoidance strategies Meaning-based coping	Women used all four coping strategies and experienced all three kinds of stress more than men. *Active-avoidance coping* Significant positive individual and partner effects for marital, personal and social distress both genders. Low/Low use significantly related to decreases both genders personal and marital distress and social distress for men only. Women- partner's increased use related to increased personal and social distress. *Active-confronting coping* Significant positive effects women on personal and marital distress and for men on social distress. Significant partner effect men on marital distress. Both partners' low usage significantly lowered marital distress for men. *Passive-avoidance coping* Significant positive effects both genders on personal distress. Significant positive affects marital and social distress for men. No significant partner. *Meaning-based coping* Significant negative affects personal, marital and social distress for women. Significant positive effects for men's social distress. Negative partner effects men's marital distress. Positive partner effects women's social distress. Both partners' low usage produced higher levels of marital distress.

Peterson, et al. (2006)	Cross-sectional	420 couples referred for IVF	Fertility problem stress, marital adjustment and depression	i) ii) iii) iv) v) vi) vii) viii)	escape/ avoidance confrontive coping self-controlling accepting responsibility planful problem solving seeking social support distancing positive reappraisal	Three significant results for coping group and gender *Distancing* Significant gender differences depression and infertility stress. F-low/M-high significantly higher levels of infertility stress., especially for female's, and depression and lower marital adjustment. *Self-controlling* F-high/M-low: significantly higher infertility stress and depression levels and lowered marital adjustment. *Accepting responsibility* High concordance (High/High) significantly higher levels of infertility stress. Low concordance (Low/Low) significantly lower infertility stress, especially for males, and depression and higher levels of marital adjustment.
Levin, et al. (1997)	Cross-sectional	46 couples undergoing treatment.	Psychological distress and marital satisfaction.	• Task-oriented coping • Emotion-oriented coping • Avoidance-oriented coping		*Task-oriented coping* Significant main effect concordance. Low/Low significant lowered marital satisfaction females. No significant effects for males. *Emotion-oriented coping* Concordance significant effect on marital satisfaction. M-high/F-low: significantly lower levels marital satisfaction. Low/low concordance: high female marital satisfaction. M-High/F-low lowest female marital satisfaction. Significant main effect gender and psychological distress. High concordance and M-high/F-low - high male distress. Low concordance - low male distress.
Stanton (1992)	Cross-sectional Mixed method	52 couples and 9 women.	Psychological distress, infertility	i) ii)	Confrontative coping Distancing	Significant downward comparison men to partner and upward comparison for women.

	Correlational		specific distress.	iii) iv) v) vi) vii) viii) Social comparison.	Self-control Seeking social support Accepting responsibility Escape-avoidance Planful problem solving Positive reappraisal	Women using increased distancing, lowered taking responsibility and positive reappraisal engaged in downward comparison. Downward comparison for men using positive reappraisal.
Daniluk & Tench (2007)	Longitudinal	38 definitively infertile couples	Psychological distress and marital and life satisfaction.	Emotion and problem-focused coping.		T1, T2 & T4: lack of perceived options and high emotion-focused coping associated with psychological distress, low marital and life satisfaction. T3: perceived lack of available options and social support and low problem-focused coping associated psychological distress, less marital and life satisfaction.
Stanton, et al. (1992)	Cross-sectional Correlational	72 couples and 24 women.	Psychological distress	i) i) ii) iii) iv) v) vi)	Confrontative coping Distancing Self-control Seeking social support Accepting responsibility Escape-avoidance Planful	88% of men and 94% of women used ≥7 of 8 coping strategies. 32% of men and 35% of women obtained GSI scores >one SD above the mean. *Relations between coping and distress* Avoidance significantly associated with male distress. Escape-avoidance and accepting responsibility related increased female distress - seeking social support associated with lowered distress. *Differences between spouses' coping and distress* Males use distancing, self-controlling coping and planful

				vii)	problem solving Positive reappraisal	problem solving more whereas females use seeking social support and avoidance. No difference between partners' global distress. *Relations between spouses' coping and distress* Partner's adjustment not correlated. Partners' scores for 3/8 coping scales significantly correlated. Positive correlations: confrontative coping, planful problem solving and positive reappraisal. Partners' coping associated with the other's adjustment: F-high/M-low self-controlling- males more distressed.
Abbey, et al. (1991)	Cross-sectional	185 infertile and 90 presumed fertile couples	Fertility problem stress overall and in various life domains, life quality and depression.	Problem solving and escape coping		*Infertile couples*: Females significantly more sub-fertility related stress than males. Females more disruption and stress in personal and social domains. Men more home life stress and lower performance. Females engaged in more problem-solving and escape-focused coping than males. Main effects of fertility status on depression and problem-solving and escape coping. Infertile individuals had higher levels of problem-solving (women only) and escape coping (men and women).

Table 5: Data from quantitative studies included in the review.

Qualitative studies

Two qualitative studies (Phipps, 1993; van Rooij, et al., 2009) were identified. Further examination of these studies revealed data unrelated to the specific question under review, as such only data relating to couples' coping is discussed.

Coping was derived as a theme, specifically the use of avoidance, within both studies (Phipps, 1993; van Rooij, et al., 2009). van Rooij, et al. (2009) found that couples avoided telling external parties and having contact with them due to perceived stigma around their sub-fertility. However, Phipps (1993) reported specific gender differences in the use of avoidance. Males were reported to avoid thinking about the sub-fertility whereas females avoided attending events which might remind them about it (Phipps, 1993). Furthermore, couple members were found to differ in the use of problem-focused and meaning-based coping and also the use of verbalization and humor to express their feelings (Phipps, 1993). Females were found to employ these forms of coping more than males (Phipps, 1993).

Support between partners' was reported as important in coping with sub-fertility as it enabled the sharing of tears, hope and negotiation of treatment decisions (Phipps, 1993; van Rooij, et al., 2009). However, negative consequences, such as strain and conflict, within the couple's relationship were reported.

Phipps (1993) specifically addressed the influence of intra-couple coping concordance. Intra-couple coping discordance was reported to result in feelings of anger, frustration, isolation and guilt (Phipps, 1993) for partners. Marital strain also resulted as both partners tried to be supportive of each other whilst simultaneously managing their own distress (Phipps, 1993).

Further qualitative research specifically exploring the underlying reasons for why couple members cope as they do, the influence that they perceive their own and their partner's coping to have upon themselves and their partner, and how they negotiate

the concordance and/or discordance between their coping and the associated consequences within the couple would be beneficial, as this would help to provide depth and further meaning to the current findings and those shown within the quantitative literature.

Author and date	Study design	Number of participants	Themes	Main coping and fertility problem stress findings
van Rooij, et al. (2009)	Qualitative Couple and single-responder interviews	11 couples and 9 women	Six superordinate themes 1. effects on self, 2. effects on the relationship with the partner 3. effects on the relationship with others 4. disclosure 5. coping 6. the future	1. *Effects on self* -loneliness, anxiety, shame, guilt and stress. 2. *Effects on relationship with partner* - level of partner support, feeling lonely, distrust. Difficulties talking about the sub-fertility -chance distress other. 3. *Effect on relationships with others* – Stigma. Avoid others. 4. *Coping* – Hope, confidence and trust in technological developments as solution . Support from others. Distraction temporarily take sub-fertility off mind. *The future* – Couldn't consider future without child. Refocusing on work and schooling.
Phipps (1993)	Qualitative Separate interviews	8 couples	10 categories: 1. Evaluation of the meaning of childlessness 2. Feelings associated with infertility 3. Coping 4. Marital functioning 5. Gender role 6. Relationships 7. Investment 8. Perseverance 9. Perception of the health care system 10. Self-perception- females only.	*1.* *Evaluation of the meaning of childlessness* –All expected pregnancy. Men ambivalent, Women- infertility overtook life – *2.* *Feelings associated with infertility* – Both genders sorrow, isolation, urgency, guilt, powerlessness *3.* *Coping* – Gender differences. Men - cognitive dissonance, avoided thinking about it. Women -verbalized, sought information, concentrating on the positives, avoided events remind them of it, humor to discuss and express feelings. Intra-couple coping discordance - anger, frustration, guilt and isolation. *4.* *Marital functioning* – Support partner - sharing of tears, hope and decision-making. Increased tension - differences in attitudes and coping styles and the desire to be supportive. Women aware when emotions overwhelming. Not talking about their feelings or waiting for when perceived husband could cope.

Table 6: Data from the qualitative studies included in the review

Quality assessment

Quality assessment ratings for the quantitative studies ranged between 8 and 16 (Appendix G). All studies performed well upon the reporting of their sampling strategy but poorly in reporting ethical approval. Quality assessment ratings for the qualitative studies were 12 and 13 (Appendix G). Neither provided clear rationales or discussed the values and assumptions underpinning them. However, both reported data collection and analysis and the implications of the results.

Methodological issues

Coping and fertility problem stress measurement

Different measures of coping and sub-fertility related stress were used between studies included in the review. The most common measure of coping employed was the Ways of Coping Questionnaire (Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen, 1986). However, other studies used revised versions of this questionnaire (Abbey, et al., 1991; Daniluk & Tench, 2007; Peterson, et al., 2009; Peterson, et al., 2008). Whilst, the coping measures used all have good reliability and validity, the assessment of coping differed as a result, with coping dimensions (Daniluk & Tench, 2007), behaviours grouped under these dimensions (Peterson, et al., 2006) and styles of coping (Peterson, et al., 2008) being measured between studies.

Similarly, the assessment of fertility related stress varied with different aspects such as, psychological distress (Stanton, 1992), marital adjustment (Peterson, et al., 2006) and life satisfaction (Daniluk & Tench, 2007), measured individually or simultaneously between studies by different measures. All measures were reported to be reliable and valid.

The use of different measures of coping and fertility problem stress may be considered to limit the generalisability and comparability of findings between studies. Furthermore, the reliability and validity of results obtained upon the measures may be

limited, particularly for the coping, as these measures were designed to assess individual's general coping strategies. Coping with sub-fertility may require specialized behaviours, which are not adequately assessed by general coping questionnaires. Thus development of measures of sub-fertility coping and stress or the standardised use of measures across studies would allow greater comparability between findings, expanding knowledge of sub-fertile couple members' stress and coping.

Discussion

Differences in the coping strategies utilised by sub-fertile couple members, how these influence partners' experience of distress and a relationship between intra-couple coping concordance and discordance and partners' distress levels were found in this review.

At an individual level, differences identified in the utilisation of coping strategies between couple members (Abbey, et al., 1991; Phipps, 1993; Stanton, et al., 1992) may be influenced by gender role differences and subsequent variation in the appraisal of sub-fertility and the importance of achieving parenthood. Previously, sub-fertility has been considered more threatening and distressing for females (Peterson, et al., 2008; Phipps, 1993), due to the centrality of 'mother' and 'nurturer' to their gender role (Edelmann & Connolly, 2000; Phipps, 1993), as a result females may use coping strategies to a greater extent than males to manage this (Abbey, et al., 1991; Stanton, et al., 1992; van Rooij, et al., 2009).

Gender differences in the use of meaning-based (Peterson, et al., 2009; Peterson, et al., 2008) and self-controlling (Stanton, et al., 1992) coping strategies were notable. Meaning-based coping is considered an important developmental task for couples transitioning through sub-fertility (Peterson, et al., 2009), enabling integration of the experience into their identity. Females gained the most benefit from this form of coping (Peterson, et al., 2009; Peterson, et al., 2008), which may be related to the greater

negative impact of sub-fertility upon females' gender identity (Phipps, 1993), and the need to successfully integrate sub-fertility into their identity and positively refocus upon other aspects of their life to reduce distress. Similarly, the use of self-controlling coping by males may reflect their gender role, particularly the socially prescribed male gender role script of low emotional expression (Glover, et al., 2009). Therefore males may engage in more self-controlling coping (Stanton, et al., 1992) as it is perceived to fulfill gender role expectations by containing their emotions.

Despite the gender differences in the use of coping strategies the results of the review suggest a contradiction, in that male and female partners appeared similar in their use of confrontative and avoidant coping styles to manage sub-fertility related stress. Krohne (1993) suggested different motivations for employing avoidant and confrontative coping styles, with desires to reduce levels of emotional stress and cognitive uncertainty proposed, respectively. However, both coping styles are reported to have positive and negative consequences (Krohne, 1993; Weidner & Collins, 1993). Confronting helps to reduce uncertainty by problem solving and implementing action to overcome the stressor, but can increase negative affect from the rehearsal of threatening information and failure of action (Krohne, 1993). Avoidance can reduce emotional arousal by distancing the individual from the stressor, but this may hinder emotional processing and the initiation of action to overcome it (Weidner & Collins, 1993). Whilst confrontative and avoidant coping styles were employed by partners they were found to negatively influence partners' distress levels. This may be because neither strategy could manage the simultaneous fluctuating emotional and cognitive demands produced by sub-fertility.

Lazarus & Folkman (1984) suggested coping varies over time with the demands of the stressor, coping with sub-fertility should therefore be seen to alter as couples progress through different aspects of sub-fertility investigation and treatments. Three

studies (Daniluk & Tench, 2007; Kraaij, et al., 2008; Peterson, et al., 2009) assessed coping and distress longitudinally. Personal distress was found to decrease over time (Daniluk & Tench, 2007; Peterson, et al., 2009) but marital distress increased for both partners (Peterson, et al., 2009). This further evidences the reciprocal nature of managing sub-fertility within a couple (Peterson, et al., 2009). Schmidt, et al. (2005) suggested problem-focused coping to be effective when the stressor is controllable while emotion-focused and meaning-based coping to be efficacious when it is not. This suggestion can be applied to sub-fertility, where the utilisation of different coping strategies may be more efficacious in the management of changing demands between the different stages of investigation and treatment (Berg & Wilson, 1991). The findings of the longitudinal studies within the review do not present clear evidence for the efficacy of different coping strategies at different stages of sub-fertility. This may be proposed to be due to the different coping strategies assessed between the studies, differences between the studies samples and the small number of longitudinal studies identified thus limiting comparison and generalisability between studies. Further longitudinal research into sub-fertile couple members' coping and distress over the different stages of investigation and treatment is required to determine challenges faced by partners throughout the course of sub-fertility.

The gender differences found between partners' coping strategies and the subsequent influence upon distress may be affected by differences between studies in the level of coping assessed. Krohne (1993) suggested that coping can be analysed at the conceptual and behavioural levels. The conceptual level represents the overarching coping strategy under which similar coping acts are grouped, whereas the behavioural level represents the single coping acts. The level of coping assessed is proposed to influence differences found in coping research (Krohne, 1993; Tamres, Janicki, & Helgeson, 2002). Analysis at the conceptual level, may cause difficulties in comparing

studies findings as different behaviors may be used to compose the overarching strategy between studies (Tamres, et al., 2002). Gender differences may further be over or under reported as differences between males and females upon a small number of behaviours are masked by the over arching coping strategy (Krohne, 1993; Tamres, et al., 2002). Similarly, analysis at the behavioral level may cause differences to be under reported as different behaviors are assessed between studies (Krohne, 1993) and are given different labels hindering comparison (Tamres, et al., 2002). Differences found within the review should be interpreted cautiously as different measures of coping were employed between studies with different strategies and behaviours assessed, for example Peterson, et al. (2009) and Stanton, et al. (1992). Considering this, grouping the coping acts assessed by some of the studies within the review into the different strategies assessed by other studies used within the review may have identified more similarities between the coping of male and female couple members. No attempts were made within the current review to group the acts assessed into the different coping strategies as, upon further investigation, different definitions for the acts and strategies and different groupings of acts under the different strategy labels were found between the studies used within the review, thus still making it difficult to draw comparisons about the use of different strategies and the influence upon sub-fertility related distress between studies.

At a couple level, the results of the review (Levin, et al., 1997; Peterson, et al., 2006; Peterson, et al., 2008) suggest an influence of sub-fertile couple members' coping upon their partner's distress levels. However, the relationship between intra-couple coping concordance and discordance can be considered subtle, depending upon the strategies and the interaction between their concordant and/or discordant use. As such, closer examination of the results reveals that the potential for support between partners is an important factor to consider within intra-couple coping concordance and/or

discordance. Sub-fertile couple members are considered to be heavily reliant upon each other for support (Glover, et al., 2009; Phipps, 1993; van Rooij, et al., 2009), due to their reluctance to confide in others external to the relationship, because of feelings of failure (Jordan & Revenson, 1999), shame and fear of stigmatization (van Rooij, et al., 2009). Partner support offers the opportunity to express and normalize feelings and decide upon courses of action to overcome the problem (Phipps, 1993). However, concordance and discordance within a number of coping strategies (Levin, et al., 1997; Peterson, et al., 2006; Peterson, et al., 2008) may result in couple members' perceiving their partner as unable to provide support because they appear unavailable (Peterson, et al., 2006), uncaring (Draye, Woods, & Mitchell, 1988), or at a different stage of adjustment; leaving partners feeling isolated.

From the studies reviewed, the discordant use of self-controlling and distancing coping and the high concordant use of emotion-focused coping and accepting responsibility within sub-fertile couples were found to result in increased levels of sub-fertility related distress and lowered marital adjustment (Levin, et al., 1997; Peterson, et al., 2006). These specific strategies may be suggested to impact upon the sub-fertility related distress levels experienced by couple members for a number of reasons. Firstly, distancing and self-controlling coping can be suggested to cause couple members to withhold their feelings from each other, resulting in their partner perceiving them to be unaffected by the stressor and/or unavailable to offer support and feeling alone in their own distress. Partners' feelings of isolation may particularly be exacerbated in couples employing a discordant pattern of self-controlling and distancing as one partner wants to approach and seek support from the other who appears uncaring and/or unwilling to provide the support desired, thus leading to greater distance within the couple and increased sub-fertility related stress as neither partner is able to process and manage their feelings. Interestingly, the influence of self-controlling was found to result in

heightened distress for males whose partner used higher levels of this strategy compared to them (Peterson, et al., 2006), suggesting an influence of gender stereotypes of coping upon partners' distress levels, particularly in cases where these stereotypes where not adhered to by one partner. Secondly, in comparison to the previous coping strategies, high concordant use of emotion-focused coping and accepting responsibility may lead to heightened emotional expression within the couple making it too overwhelming for either partner to optimally process and manage their own and/or their partners' feelings, thus resulting in a lowered capacity to provide support for each other due to being emotionally overwhelmed. For example, Phipps (1993) found that females selectively sought their partner's support, as they were cautious about overwhelming them when they were struggling with their own sub-fertility related stress, resulting in feelings of isolation and frustration for both partners and increased sub-fertility related distress.

Patterns of coping concordance and discordance within sub-fertile couples may therefore be suggested to pose negative consequences for the provision of support between partners, through the creation of distance when closeness may be more beneficial to coping (Stanton, 1991).

Implications

Sub-fertile couple members use coping strategies to different extents, leading to patterns of concordance and discordance emerging between partners, which have both positive and negative consequences upon an individual's, and their partner's, distress levels. A key consideration in intra-couple coping concordance and discordance was the provision of support between partners, which holds implications for the role of healthcare services in supporting sub-fertile couples. Encouraging couple members to voice their experience of sub-fertility and attempts to cope with it whilst meeting with each other and a healthcare professional may improve understanding between partners of each other's distress and ways of coping and the recognition of similarities in their

experience. Thus helping to alleviate negative perceptions that couple members may have of the each other‘s ‘availability’ to provide support and the negotiation of partners’ needs and how these can be met within the couple (Glover, et al., 2009). Commonly, doctors’ working with sub-fertile couples focus on the biological and physical factors associated with sub-fertility. The time available during their consultations and the doctors’ confidence in discussing and resolving difficulties developed as a consequence of intra-couple coping concordance and/or discordance is limited, therefore engaging psychologists and/or counselors to work with couples, alongside doctors, to hold such discussions may prove valuable.

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Part Two

Sub-fertility: The expectations and perceptions of male and female members of sub-fertile couples of medical consultation.

Sub-fertility: The expectations and perceptions of male and female members of sub-fertile couples of medical consultation.

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This paper is written in the format ready for submission to the Journal of Social Science and Medicine. Please see Appendix C for the Guidelines for Authors

Abstract

This paper examines sub-fertile couple members' expectations and perceptions of medical consultation at a specialist sub-fertility clinic in North East England. Previous research has found patient expectations and perceptions of medical consultation to influence patients' adherence and stress levels. Medical consultation is deemed important within sub-fertility, due to a couple's reliance upon doctors to achieve parenthood. Effective sub-fertility medical consultation is considered dependent upon the equal involvement of both couple members and the doctor in informational exchange and decision-making. Inequality can result in distress. Forty-three couples, experiencing primary sub-fertility, completed a pre-consultation expectations measure and 34 of these couples completed post-consultation measures assessing whether their expectations were considered to have been met and their perceptions of the amount of interaction that they and their partner had with the Consultant during the consultation. The study's findings show that couples expected to receive 'explanation and understanding' the most from the consultation and 'support' the least. Couple members' expectations were generally reported to have been met following consultation, with 'tests and diagnosis' and 'support' expectations being reported to have been met to a greater extent than 'explanation and understanding'. Gender differences between couple members' expectations and the meeting of expectations were observed, however no significant effect of gender in these cases was found. Expectations of 'support' were reported as met to the same extent for both genders. A significant difference was found in couple members' perceptions of the amount of interaction between the Consultant and each partner. Females were perceived to interact with the Consultant more than males by both genders. The effect of gender role differences, the reinforcing influence of the focus of sub-fertility investigations and treatments and previous experiences of medical consultation upon couple members' expectations and perceptions are

considered. Expectations and perceptions of sub-fertile couples attending medical consultation are currently under researched.

Sub-fertility: The expectations and perceptions of male and female members of sub-fertile couples of medical consultation

Introduction

Sub-fertility is defined as the inability to conceive after 12-months of regular unprotected sexual intercourse (Cousineau & Domar, 2007). It is suggested to affect around 15% of couples within the United Kingdom (Anderson, Sharpe, Rattray, & Irvine, 2003), many of whom will be attempting conception for the first time (Anderson, et al., 2003). Sub-fertility is considered stressful and distressing for both couple members (Greil, 1997), as difficulties conceiving are unexpected and both partners are unable to achieve their goal of parenthood (Peterson, Pirritano, Christensen, & Schmidt, 2008; van Rooij, van Balen, & Hermanns, 2009).

The process of sub-fertility investigations and treatment can be another source of stress for couple members (Berg & Wilson, 1991; Takefman, Brender, Boivin, & Tulandi, 1990), due to the practical and physical demands these procedures place on them, as partners are required to undergo intimate physical examinations, monitor physiological signs and engage in a prescribed schedule of intercourse (Berg & Wilson, 1991; Blenner, 1992). This can further result in emotional stress (Jordan & Revenson, 1999) and difficulties within marital and social relationships for couple members (Peterson, et al., 2009; Peterson, et al., 2008). This emotional and psychological strain can be protracted as couples undergo repeat diagnostic and treatment procedures in their pursuit of parenthood (Berg & Wilson, 1991; Blenner, 1992). Research into stress in sub-fertile couples has predominantly focused upon the process of sub-fertility investigations and treatments (Berg & Wilson, 1991), leaving couples' experience of medical consultation under researched, despite it being considered an important aspect of sub-fertility medical care (Lalos, 1999).

Medical consultation is considered the primary medium through which a doctor and patient collect and exchange information about a set of problems and decide upon a course of action (Lipkin, 1996; Williams, Weinman, Dale, & Newman, 1995). Doctors' performance within medical consultation has been proposed to influence patients' short and long-term health outcomes (Street Jr., 1992), with adherence to treatment, improved physical health, reduced emotional distress, and higher satisfaction being found to result from positive patient perceptions (Lipkin, 1996; Smith, Winkel, Egert, Diaz-Wionczek, & DuHamel, 2006; Street Jr., 1992).

Research has focused upon patient perceptions of doctors' verbal and non-verbal behaviours and their influence upon the consultation outcomes (Goldman, et al., 2009; Smith, et al., 2006; Street Jr., 1992). Positive perceptions of informational exchange, involvement in decision-making and trust in the doctor's skill and knowledge during medical consultation have been associated with positive outcomes (Goldman, et al., 2009; Smith, et al., 2006). Furthermore, positive outcomes have been associated with patient perceptions of doctors' engagement in interpersonal relationship behaviours (Kenny, 1995; Street Jr., 1992), considered to include: facilitation of emotional expression (Goldman, et al., 2009), empathy and the provision of support and reassurance (Street Jr., 1992). However, despite their importance, doctors are often perceived as not engaging in interpersonal relationship behaviours by patients (Goldman, et al., 2009; Ruiz-Moral, Rodriguez, de Torres, & de la Torre, 2006).

Perceptions are considered subjective and idiosyncratic, as their development is influenced by an individual's previous experiences of different contexts, their social and cultural background and psychological factors (Sofaer & Firminger, 2005). As such research has found discrepancies between patient perceptions of medical consultation and independent ratings of behaviour frequencies (Street Jr., 1992).

Specifically within sub-fertility, Blenner (1992) and Phipps (1993) found that couple members' perceptions of investigation and treatment procedures and doctors' competence and interpersonal sensitivity were important in mediating their experience of stress and negative emotions. Couples were found to be less stressed once they felt confident in the doctors abilities to help them (Blenner, 1992) and they perceived the doctor to be considerate of their feelings and needs regarding sub-fertility (Blenner, 1992). Phipps (1993) found gender differences in the consequences of partners' negative perceptions of doctors' interpersonal sensitivity, with males reporting experiencing more negative emotions than females who considered it tolerable if it meant that they achieved parenthood.

Patient perceptions of medical consultation are considered important in determining a number of outcomes. This may be pertinent within a sub-fertility setting where patient perceptions are seen to mediate stress and the experiencing of negative emotions within an already potentially distressed population.

An expectation is defined as the anticipation of an outcome occurring within a given situation (Carver & Scheier, 2004). Expectations help to reduce individual's uncertainty about situations and are based upon schemas and scripts developed over an individual's life about different people and situations (Eynsenck & Keane, 2003). Zeelenberg, van Dijk, Manstead, & van der Pligt (2000) suggested that when expectations are not met we experience negative emotions, including disappointment. Individuals are suggested to be able to lower their initial expectations to protect themselves from the negative emotional consequences of unexpected outcomes (Feather, 1969). In addition, less specific expectations about situations may be set by individuals to protect themselves from negative emotions following unmet expectations (Armour & Taylor, 1998).

Recognition of the influence of patients' expectations upon healthcare outcomes has grown within general medical practice (Delgado, et al., 2008; Williams, et al., 1995; Zebiene, et al., 2004). Williams, et al. (1995, pg. 194) defined expectations as "the patient's needs, requests or desires prior to seeing the doctor". It has been recognised that expectations of medical consultation can be influenced by patients' prior consultation experiences and their health and psychological status (Williams, et al., 1995; Zebiene, et al., 2004).

Previous research found gender differences in patient expectations of medical consultation. Female patients were found to desire information and explanations from medical consultation in order to provide them with an understanding of their problem (McGowan, Pitts, & Clark-Carter, 1999; Price, et al., 2006) and emotional support (Warwick, Joseph, Cordle, & Ashworth, 2004) whereas males wanted information and explanation about their problem, only. Emotional support was deemed less important by males (Glover, Gannon, Platt, & Abel, 1999; Kedem, Mikulincer, Nathanson, & al., 1990).

Lipkin (1996) proposed that medical consultation is important within sub-fertility as doctors can become key figures in a sub-fertile couples' life. This may be due to the secrecy surrounding a couple's sub-fertility (Lipkin, 1996) and the solution to a couple's sub-fertility that the doctor is considered to possess (Phipps, 1993; van Rooij, et al., 2009). Lalos (1999) suggested that a triad is formed within sub-fertility medical consultations between the doctor and the couple members. This triad is proposed to function most effectively when all members are equally involved in informational exchange and decision-making. However, Souter, Penney, Hopton, & Templeton (1998) reported gender differences in the inclusion of couple members within sub-fertility medical consultation by doctors, with males being found to be excluded from consultations. Lalos (1999) suggested that difficulties in the functioning of the triad

could be experienced if one partner felt excluded from the consultation. The exclusion of males from sub-fertility consultations (Souter, et al., 1998) may negatively impact upon their expectations and perceptions of the consultation as well those of their partner, which may in turn produce distress for both partners.

There are clear gaps within the literature related to sub-fertility and medical consultation. Most notably the expectations that sub-fertile couples hold about medical consultation within a specialised setting and their perceptions of the consultation. The current study therefore aims to investigate the expectations and perceptions of couples engaging in sub-fertility medical consultation.

R*esearch questions*

Specific research questions were: (i) What expectations do patients attending a sub-fertility medical consultation hold? (ii) Are there gender differences present in patients' expectations of sub-fertility medical consultation? (iii) To what extent do sub-fertile couple members report their expectations to have been met following consultation? (iv) Are there differences between couple members in the amount of interaction they perceive themselves and their partner to have with the Consultant during sub-fertility medical consultation?

Method

Design

A non-experimental correlational design, including the pre and post consultation measurement of expectations and post consultation measurement of patient perceptions was used. Between and within-subjects designs were also employed.

Participants

Fifty-four heterosexual couples experiencing primary sub-fertility and attending the specialist sub-fertility clinic for consultation with the Consultant Obstetrician and Gynaecologist were approached. Eleven couples were unable to participate, making the

participation rate 80% of those approached. Those couples that chose not to participate did so because they reported being uninterested in the study or suggested that they would be unable to complete the post consultation measures due to external constraints, such as having to return to work.

Forty-three couples completed the pre-consultation measures. Thirty-four of these couples completed the post-consultation measures, giving a 21% attrition rate.

Measures

Demographic and fertility information

A participant information form was used to collect demographic data and data about individuals' relational status, sub-fertility and clinic experiences.

Expectations

Previous research was searched for measures assessing patient expectations of medical consultation, both within general medical practice and more specifically within sub-fertility. No measures of patient expectations specific to sub-fertility medical consultation were found. A small number of measures of patient expectations within primary care were found. Two of these measures were the Patient Intentions Questionnaire (PIQ; Salmon & Quine, 1989) and the Expectations Met Questionnaire (EMQ; Williams, et al., 1995) (Appendix H), which were considered reliable and valid in their measurement of patient expectations of medical consultation.

The PIQ (Salmon & Quine, 1989) is a self-report measure designed to assess patient expectations of medical consultation. It was originally developed to assess patient expectations of consultations within general practice. It contains 42 statements about what a patient may expect to receive during consultation. Respondents rate the extent to which they agree with each of the statements on a three-point scale: 2= Agree, 1= Uncertain, 0= Disagree. A principal components analysis (Salmon & Quine, 1989) proposed four sub-scales were present within the PIQ; 'explanation and understanding',

'support', 'medical treatment' and 'information seeking'. The PIQ was further utilised within a study of primary care patients' expectations (Williams, et al., 1995). A principal components analysis found three sub-scales within the PIQ: 'explanation & understanding', 'support' and 'tests & diagnosis' (Williams, et al., 1995).

The EMQ (Williams, et al., 1995) is a self-report measure designed to assess whether patients' expectations of medical consultation were considered to have been met. It consists of the 42 statements from the PIQ but expresses each expectation as met. For example "The doctor explained what is wrong with me". The statements are rated on the same scale as the PIQ and are organised on the same sub-scales developed by Williams, et al. (1995).

For the purposes of this study the sub-scales of Williams, et al. (1995) will be used for analysis because the EMQ was developed from the PIQ, thus both are organised around the same sub-scales. Previous studies with these measures have performed principal components analyses to form relevant sub-scales for each study. Comrey & Lee (1992) have proposed that at least 300 participants are required to conduct a principal components analysis, with a sample size of 100 considered suboptimal. Therefore it was not appropriate to conduct this analysis due to the small sample size, which may produce inaccurate loadings of components for the creation of sub-scales unique to the current study.

Perception

In the absence of a suitable measure of patient perceptions within a sub-fertility clinic, the Patient Perceptions of the Consultation Experience (PPoCE) was developed (Appendix I). The PPoCE is a self-report measure comprising three sections assessing patient perceptions of: (i) of the doctors' consultation behaviours, (ii) the utility of different aspects of the consultation and (iii) the amount of interaction that they and their partner had with the doctor during the consultation.

Section one of the PPoCE contained 39 statements, which participants rated on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). The statements were grouped around four sub-scales: Data gathering to understand the patient(s) and their problem(s); Patient-centered behaviour; interpersonal sensitivity; physician attributes. Section two contained open questions designed to qualitatively explore patient perceptions of the utility of aspects of the consultation and the appropriateness of the consultation's content to their needs. In the final section, participants recorded percentages to represent the amount of interaction they perceived themselves and their partner to have with the doctor around different aspects of medical consultation.

Only data from the final section of the PPoCE were analysed, data from sections one and two were gathered but were not analysed as they do not directly relate to the study's research questions.

Procedure

Approval to conduct the study was gained from the local research and ethics committee and local NHS Trust (Appendix L). Couples were recruited when attending the specialist sub-fertility clinic for consultation with the Consultant Obstetrician and Gynaecologist between November 2009 and March 2010. Only patients of one Consultant from the clinic were included in the study to exclude the clinician as a source of variability. Nursing staff approached couples upon presentation at the clinic and enquired if they would be willing to participate in research taking place at the clinic. Couples who agreed were introduced to the researcher and provided with further information about the research before deciding whether to participate. Couples who agreed to participate gave written consent and were provided with the participant information form and PIQ to complete prior to entering consultation. Upon completion of these questionnaires couples entered the medical consultation. After exiting the consultation couples were approached to complete the final two questionnaires, the

EMQ and the PPoCE. Couple's data were allocated a study number and the data of each partner within the couple was coded by gender, allowing for comparison within and between couples to be made.

Data analysis

Quantitative responses for participants' demographics and fertility information, PIQ, EMQ and section three of the PPoCE were entered into the Statistical Package for the Social Sciences database (SPSS v17).

Data for 43 couples upon the pre-consultation measures and 34 couples upon the post-consultation measures were analysed.

Data formatting

Participants' scores upon the PIQ and EMQ were assessed to examine whether expectations were perceived as met. The extent of agreement between PIQ and EMQ scores were computed. Three scores of meeting expectations were assigned depending upon the extent of agreement between PIQ and EMQ responses (0 = expectation stated but not met; 1 = expectation not stated but received the aspect of consultation; 2 = expectations stated and met).

In section three of the PPoCE, male and female perceptions of their own and their partner's interaction with the consultant were added up and divided by the nine questions to produce an average amount of overall perceived interaction with the Consultant for participants' perceptions of their own and their partner's interactions.

Normal distribution

Data from the PIQ, EMQ, meeting expectations and average perceptions of one's own and one's partner's interaction with the Consultant were assessed for normal distribution. Kolmgorov-Smirnov Z assessment of skewness showed that data were not normally distributed, particularly the 'support' sub-scale upon the PIQ and EMQ. Logarithms of the PIQ, EMQ and meeting expectations sub-scale scores were taken to

assess whether the data could be normalised. This attempt to reduce skewness was unsuccessful, due to the floor effects created by the small scale that participants' scored their expectations on. Data could not be excluded to remove floor effects, as meaningful data about participants' expectations of sub-fertility medical consultation would be lost. It was decided that parametric tests would be used to analyse the data, as these allowed for some violation of normal distribution and were the most appropriate analysis to meet the requirements of the research questions. However, the results of these analyses should be interpreted with caution due to the skewed raw data.

Participant perceptions scores were found to be less skewed. A non-parametric test, Mann-Whitney U, and a parametric, paired T-test, were conducted to assess the influence of skewness upon analysis of difference between couple members' perception scores. No difference was found and so the parametric paired T-test was chosen to analyse data.

Correlations

Pearson's correlations were conducted to assess relationships between individual PIQ and meeting expectations sub-scale scores and between male and female participants' sub-scale scores. Pearson's correlations were further conducted to assess whether male and female perceptions of their own and their partner's interaction with the Consultant were related.

Multivariate Analysis of Variance (MANOVA)

Independent MANOVA analyses were conducted to assess whether there was a significant effect of gender upon PIQ and the meeting of expectations sub-scale scores.

Paired samples T-test

Paired samples T-tests were used to assess whether there were differences between male and female average perceptions of: (i) their own interaction with the Consultant, (ii) their partner's interaction with the Consultant, and (iii) their interaction

with the Consultant compared to the perceptions of their interaction with the Consultant by their partner.

Results

Description of the sample

Basic demographic data is summarised in Table 1. Educational level, and ethnicity were assessed using a categorical system therefore the percentages of people in each category are presented (Table 2). On average, men were older than women, had a lower educational level and were all of White- British ethnicity. Women reported a longer mean duration attempting to conceive than men.

	Males			Females		
	Mean	SD	Min.- Max.	Mean	SD	Min.- Max.
Age	32.77	5.48	21 – 46	30.33	4.46	23 – 39
Relationship length	8.35	3.92	3 – 22	8.35	3.92	3 – 22
Time spent trying to conceive	3.64	2.41	1 – 13	3.76	2.33	1 – 13

Table 1: Participant mean age, relationship length and length of time spent trying to conceive (years).

	Males	Females
Ethnicity	White-British (100%)	White-British (95.3%), White- Other Background (2.3%) African (2.3%)
Educational level	GCSE's/O-Levels (67.4%), A-Levels (11.6%), Undergraduate degree (4.7%), Postgraduate degree (9.3%) Other (7.0%)	GCSE's/O-Levels (39.5%) A-Levels (18.6%), Undergraduate degree (16.3%), Postgraduate degree (14.0%) Other (9.3%)

Table 2: Participant demographics.

Thirty couples were married and 13 were co-habiting. Couples reported a range of locations of cause: 18.6% male-factor, 27.9% female-factor, 14.0% of joint-factor and 39.5% idiopathic sub-fertility. Eighteen couples were attending the clinic for the first time and as such may not yet have received a diagnosis, thus contributing to the high level of unknown cause. Some couples were also found to be attending the clinic for the second (*n=14*), third (*n=4*) and 4th or more (*n=7*) time.

Medical consultation expectations

Mean scores upon the PIQ sub-scales show that patients desired 'explanation & understanding' (*m=1.21, SD=0.53*) the most from the consultation whilst 'support' (*m=0.48, SD=0.46*) was desired the least (Table 3). A moderate desire for 'tests & diagnosis' (*m=0.85, SD=0.54*) was shown.

PIQ sub-scale	Mean	SD
Explanation & understanding	1.21	0.53
Support	0.48	0.46
Tests & diagnosis	0.85	0.54

Table 3: Participants' mean scores upon the PIQ sub-scales.

Male and female expectations

Both males and females desired 'explanation & understanding' the most and 'support' the least from the consultation (Table 4). Females exhibited higher levels of desire for 'explanation & understanding' and 'support' from the consultation than males who showed higher levels of desire for 'tests and diagnosis'.

	Males		Females	
PIQ sub-scale	Mean	SD	Mean	SD
Explanation & understanding	1.13	0.56	1.30	0.49
Support	0.42	0.43	0.55	0.49
Tests & diagnosis	0.88	0.60	0.83	0.49

Table 4: Males and females mean scores upon the PIQ sub-scales.

PIQ sub-scale scores were correlated between male and female couple members to assess if they were related. No significant correlations were found (Table 5).

	Explanation & understanding: male	Support: male	Tests & diagnosis: male
Explanation & understanding: female	.068, NS[a]	.243, NS[a]	.068, NS[a]
Support: female	.039, NS[a]	.154, NS[a]	.039, NS[a]
Tests & diagnosis: female	.010, NS[a]	.116, NS[a]	.010, NS[a]

Table 5: Correlations between males and females PIQ sub-scale scores.

[a] non-significant correlation.

Correlations between males and females on the 'explanation & understanding' and 'tests & diagnosis' sub-scales were the same, raising a question about the extent to which the sub-scales were related. A Pearson's correlation (Table 6) showed that all the PIQ sub-scales were significantly correlated at the $p<0.01$ level. The 'explanation & understanding' and 'tests & diagnosis' sub-scales showed a high strong positive correlation ($r =0.832, n=86, p<0.01$).

	Explanation & understanding	Support	Tests & diagnosis
Explanation & understanding		.664**	.832**
Support			.623**
Tests & diagnosis			

Table 6: Correlations between sub-scales of the PIQ.

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

A MANOVA showed no significant effects for gender on the combination of the PIQ sub-scale scores (*F=1.181, p=0.321; Wilks' Lambda=0.972; partial eta squared=0.028*). In light of the strong correlation found between the sub-scales the 'tests & diagnosis' sub-scale was excluded from the MANOVA.

Meeting expectations

Patients desires upon the 'support' and 'tests & diagnosis' sub-scales were seen to be met to a greater extent than those of 'explanation & understanding' (Table 7).

	Mean	SD
Explanation & understanding	1.33	0.34
Support	1.55	0.33
Tests & diagnosis	1.47	0.35

Table 7: Mean scores for the extent to which patients' expectations were met.

Significant correlations at the $p<0.01$ level were found between the meeting of expectations upon all the sub-scales (Table 8), suggesting that patient scores of having expectations met are significantly related between the subscales.

	Explanation & understanding	Support	Tests & diagnosis
Explanation & understanding		.382**	.425**
Support			.412**
Tests & diagnosis			

Table 8: Correlations between meeting expectations sub-scale scores.

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

	Males		Females	
	Mean	SD	Mean	SD
Explanation & understanding	1.32	0.36	1.35	0.33
Support	1.55	0.36	1.55	0.30
Tests & diagnosis	1.42	0.41	1.52	0.28

Table 9: Mean scores for the meeting of expectations for both genders.

Females reported their desires upon the 'tests & diagnosis' sub-scale (*m=1.52, SD=0.28*) to have been met to a greater extent than males (*m=1.42, SD=0.41*) (Table 9). Males and females reported their 'support' expectations to have been met to the same extent (Table 9).

A MANOVA showed no significant effect of gender upon the meeting of expectations on the sub-scales (*F=0.459, p=0.712; Wilks' Lambda=0.979; partial eta squared=0.021*).

Males' and females' 'self and Consultant' interaction ratings

Males reported a lower average amount of interaction with the Consultant (*m=57.14, SD=14.65*) than females (*m=64.83, SD=14.18*) (Table 10).

	Males		Females	
Average interaction ratings	Mean	SD	Mean	SD
Self and Consultant	57.14	14.65	64.83	14.18
Partner and Consultant	62.09	17.72	54.41	15.75

Table 10: Means and standard deviations for both genders' average 'self and Consultant' and 'partner and Consultant' interaction ratings.

	Male self	Female partner	Female self	Male partner
Male self		.281, NS[a]	.297, NS[a]	.443**
Female partner			.817**	.322, NS[a]
Female self				.501**
Male partner				

Table 11: Correlations between male and female average 'self and Consultant' and 'partner and Consultant' interaction ratings.

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

[a] non-significant correlation

No significant correlation was found (*r =0.297, p=0.088*) between males and females average 'self and Consultant' interaction ratings (Table 11).

A paired T-test found that females average 'self and Consultant' interaction ratings were significantly larger those of males (*t =2.625, df=33, p ≤0.01*).

Males' and females' 'partner and Consultant' interaction ratings

Males rated the average amount of interaction that their partner had with the Consultant as larger (*m=62.09, SD=17.72*) than females rated the average amount of interaction that their partner had with the Consultant (*m=54.41, SD=15.75*) (Table 10).

No significant relationship between male and female participants' 'partner and Consultant' interaction ratings were found (*r =0.322, p=0.063*) (Table 11).

A paired samples T-test found a significant difference between males' and females' 'partner and Consultant' interaction ratings (*t =2.289, df=33, p<0.05*), with

males rating their partner's interaction with the Consultant as significantly greater than females rated their partner's interaction with the Consultant.

'Self and Consultant' interaction ratings compared to 'partner and Consultant' interaction ratings

Individual's average 'self and Consultant' interaction ratings were similar to their partner's 'partner and Consultant' interaction ratings, for both male and female participants (Table 10). For example, males' mean average 'self and Consultant' interaction rating (*m=57.14, SD=14.65*) was similar to females' mean average 'partner and Consultant' interaction rating (*m=54.41, SD=15.75*).

No significant correlation was found between male participants' average 'self and Consultant' interaction ratings and their partner's average 'partner and Consultant' interaction ratings ($r = 0.281$, $p = 0.107$) (Table 11). A significant correlation was found between female participants' ratings of their own interaction with the Consultant and their partner's average 'partner and Consultant' interaction ratings ($r = 0.501$, $p < 0.01$) (Table 11).

A paired samples T-test found that male participants' average 'self and Consultant' interaction ratings and their partner's average 'partner and Consultant' interaction ratings were not significantly different ($t = 0.871$, $df = 33$, $p = 0.390$). Female participants' ratings of their own interaction with the Consultant and their partner's average 'partner and Consultant' interaction ratings were also found to not be significantly different ($t = 0.987$, $df = 33$, $p = 0.331$).

Discussion

Current knowledge about patient's expectations and perceptions of medical consultation has focused on primary care. The importance of patient expectations and perceptions in decreasing patients' stress levels and improving adherence to treatment (Lipkin, 1996; Street Jr., 1992) has been established in this setting. Research interest in

these aspects has increased, although exploration within specialist secondary care remains limited. Sub-fertility is a distressing experience shared between couple members (Peterson, Newton, Rosen, & Schulman, 2006). Overcoming sub-fertility is heavily reliant upon the involvement of medical professionals, as such a doctor can become an important figure in a couple's life (Lalos, 1999). This study aimed to address these gaps in the literature by exploring patient expectations and perceptions of sub-fertility medical consultation, in order to begin to understand their implications for patient(s) and doctors.

Couples' primary expectation from consultation was found to be 'explanation & understanding' of the problem, reflecting previous findings (Glover, et al., 1999; McGowan, et al., 1999; Price, et al., 2006). Sub-fertility evokes feelings of shock, and disbelief (Jordan & Revenson, 1999) within couples due to the unexpected nature of the difficulties conceiving (Anderson, et al., 2003) As such couples' main goal of seeking specialist medical advice may be to gain an 'explanation and understanding' of their sub-fertility and how to achieve parenthood (Souter, et al., 1998). All of the couples in this study were experiencing primary sub-fertility, with a high proportion of the couples attending the clinic for the first time. The high expectancy for 'explanation & understanding' may therefore reflect the early stage of sub-fertility investigation that these couples were at (Berg & Wilson, 1991), which may be particularly characterised by heightened levels of uncertainty about reasons for their sub-fertility, as they expected to conceive without difficulty (Anderson, et al., 2003), thus leading them to consider an understanding of the difficulty of the utmost importance in alleviating their uncertainty.

'Support' was desired the least from medical consultation by sub-fertile couple members. This may be a surprising result as sub-fertility is widely regarded as a stressful experience for couples (Peterson, et al., 2009). Previous research has found that both primary (Ruiz-Moral, et al., 2006) and secondary care (Goldman, et al., 2009)

consultations were perceived to focus predominantly upon the physical aspects of the presenting problem, neglecting to adequately address emotional aspects. Sofaer & Firminger (2005) suggested that previous experiences influence patients' expectations of future consultations. Couple members' previous experiences of medical consultations where discussion of emotional aspects were lacking may have therefore led them to form the expectation that this would also be true of sub-fertility medical consultations. Williams, et al. (1995) suggestions support those of Sofaer & Firminger (2005), but Williams, et al. (1995) proposed that patients' expectations may not reflect their actual desires for consultation. Thus sub-fertile couples cannot be assumed to not desire 'support' from the consultation but rather they may not have expected to receive it based on previous experiences. Alternatively, couples may have shown a lower expectancy for 'support' as they did not consider their goal of achieving parenthood dependent upon it, unlike 'explanation & understanding' and 'tests & diagnosis'. Edelmann, Connolly, & Bartlett (1994) suggested that couples seeking medical intervention are those in a stable relationship and who are not emotionally overwhelmed by the sub-fertility, thus the low importance of 'support' may reflect these characteristics within the couples sampled.

Fertility is socially constructed as more important to females, with 'mother' and 'nurturer' being considered central to the female gender role (Edelmann & Connolly, 2000; Phipps, 1993) whereas 'provider' (Berg, Wilson, & Weingartner, 1991) and 'protector' (Phipps, 1993) are considered central to the male gender role. As such achieving parenthood may hold different importance for males and females. The postulated gender role differences in the centrality of parenthood may be further compounded by the predominantly female focus of sub-fertility investigation and treatment, even in male-factor sub-fertility (Berg, et al., 1991). Furthermore these may

be suggested to influence the formation of different expectations and perceptions of sub-fertility medical consultation between couple members.

Closer examination of the data suggested possible gender differences in sub-fertile couple member's expectations, however these were not significant. Females appeared to expect more 'explanation & understanding' and 'support' than males (Price, et al., 2006; Warwick, et al., 2004). The importance of parenthood and the focus of sub-fertility investigations and treatments may lead females to want and expect to receive information from consultation that helps them make sense of why their body has 'failed' them and how to achieve motherhood. Heightened levels of negative emotions aroused by sub-fertility for females may influence their expectation of 'support' from consultation to help manage these emotions. 'Support' may also be expected by females more because of gender differences in the perceived acceptability of emotional expression (Glover, McLellan, & Weaver, 2009), with it considered acceptable for females to express their emotions to others but not for males for whom emotional self-control is prescribed (Peterson, et al., 2006).

In comparison, male couple members expected more 'tests and diagnosis'. Males are required to be actively involved in the diagnostic-workup, providing semen samples and engaging in sexual intercourse at pre-determined times (Berg, et al., 1991). Therefore this expectation may reflect the secondary role males are perceived to occupy within the process of sub-fertility compared to their partner's. Furthermore, it has been proposed that males perceived themselves to be the 'protector' of their partner and reported feeling 'powerless' in alleviating her distress and providing the outcome that she desired (Phipps, 1993). As such males' expectations of contributing to 'tests & diagnosis' may be proposed to enable them to feel less powerless by facilitating them to progress towards providing their partner with a child and alleviating her distress. Male partners' expectations of contributing to 'tests and diagnosis' in order to solve the

problem may further be suggested to be concordant with the view of males as predominantly utilising problem-focused strategies to cope with stressful situations (Jordan & Revenson, 1999).

Lalos (1999) has suggested that sub-fertility medical consultations are founded upon the basis of a triad, where the doctor and both couple members work together to overcome the sub-fertility. This triad works most optimally when all members are involved in informational exchange and decision-making (Lalos, 1999). As such, the perceptions of male and female couple members, of the amount of interaction that they and their partner each had with the Consultant, were examined. Significant differences in couple members' perceptions were found, with females being perceived to interact with the Consultant more by both males and females. Gender differences in the roles that sub-fertile couple members are seen to occupy during consultation may have contributed to the interactional differences perceived. Sub-fertility investigations and treatment are predominantly focused upon females who are required to undergo a greater amount of physical examinations and monitoring (Berg, et al., 1991), with conception being treated as less dependent upon male partners by medical services, requiring him to undergo fewer tests (Berg, et al., 1991). Therefore less interaction may take place between males and the Consultant as less information is considered to be required from them. However, the Consultant cannot be interpreted to have intentionally interacted less with male partners. Males may have 'opted out' of engaging with the Consultant to some extent. Males have been reported to view sub-fertility as a difficult experience but not one which affected them to the same extent as their partner (Phipps, 1993). Males may therefore view the consultation as the female partner's domain and see their role to be providing her with support, thus leading them to take a less active role and reducing their interaction with the Consultant. This may be further reinforced by the dominant focus upon the female body during investigations and treatment.

In terms of meeting expectations, couples' expectations across the three sub-scales were, on average, reported as met. Expectations upon the 'support' and 'tests & diagnosis' sub-scales were reported as met to a greater extent than those of 'explanation & understanding'. Couples' expectations about 'explanation & understanding' may have been met to a lesser extent due to several factors. Practical aspects, such as the length of the consultation, may influence the level of information and explanation the Consultant was able to provide (Williams, et al., 1995). Many couples were attending the clinic for the first time and thus the results of tests and/or a diagnosis may not have been available (Williams, et al., 1995) from which the Consultant could provide further explanation. Lipkin (1996) further suggested that couples can often require more information than doctor is able to provide, which may leave couples feeling that their expectations were unmet.

No significant gender differences in meeting expectations were found. However, it is interesting to note that male and female expectations upon 'support' items appeared to be met to the same extent. Males expected to receive less support than their partners upon the PIQ. Phipps (1993) has suggested that females may not fully discuss their feelings about sub-fertility with their partner as they are concerned about overwhelming them. As such, females may feel that the consultation provides them with 'support' as they are able to discuss the sub-fertility. Furthermore, females may consider the consultation to provide them with 'support' to find a solution to the sub-fertility. In comparison, males may have reported their low expectations of 'support' as met, considering themselves to require less 'support' than their partner. Alternatively, they may have reported low expectations of 'support' due to the perceived social acceptability of emotional expression by males (Glover, et al., 2009). Meaning that they did not discuss their feelings during the consultation, in turn reducing their opportunity to receive 'support'.

Methodology and research limitations

The PIQ and EMQ questionnaires were developed from primary care research and their questions more closely reflect the aspects of medical consultation found within this setting, as such these questionnaires may be limited in their assessment of expectations in secondary care. However, as patient expectations have not been assessed within sub-fertility or secondary care the use of these questionnaires may be considered beneficial in providing some insight into patient's expectations of medical consultation in these settings. This may further provide information advantageous to the creation of an expectations measure specific to a sub-fertility and/or secondary care setting.

It was not possible to conduct a principal components analysis for the PIQ and EMQ, due to the study's small sample size (Comrey & Lee, 1992). The use of Williams, et als. (1995) sub-scale compositions, whilst necessary, may be considered to potentially limit the validity and reliability of the study's results, due to the sub-scales' item groupings restricted applicability to a secondary care sub-fertility clinic.

The PPoCE was a researcher developed measure and as such may be limited in its validity and generalisability. Its design enabled the assessment of male and female sub-fertile couple members' perceptions of their own and their partner's interactions with the Consultant during the medical consultation. Development of the PPoCE recognised the limitations of previous measures of perceptions of medical consultation and sought to avoid replicating these. Researcher rated recordings of consultations in addition to reports by patients of their perceptions have been considered a gold standard (Street Jr., 1992) within research. However, having only couple members' perceptions can be suggested to add validity and relevancy to the initial understanding developed from the study's results of sub-fertile couple members' perceptions of amount of interaction between the different partners and the Consultant during consultation.

A lot of couples sampled were attending the clinic for the first time, whilst this can be considered a strength as their PIQ responses were not influenced by previous consultation experience at the clinic couple members reported feeling 'uncertain' how to respond on the PIQ, because they felt that they did not know enough about the clinic to form expectations. This may have led to an over reporting of 'uncertain' by participants' upon the PIQ.

Only one Consultant was used within the study to remove the clinician as a source of variation, thus a clearer idea of couple member's expectations and perceptions of sub-fertility medical consultation may have been generated. However, factors such as the Consultant's age, gender, ethnicity and psychological mindedness may have impacted upon patients' expectations and perceptions of the consultation. Further research into the influence of Consultant related variables, such as the aforementioned, upon patients' expectations and perceptions would be beneficial.

It may be suggested that the Consultant's awareness of having their performance judged by patients could have led them to unconsciously adjust their consultation manner to receive better ratings. When discussing this with the Consultant they suggested that they had initially been more aware of their behaviour during consultation but this faded over the data collection period. They stated that they did not alter their consultation style over the course of the study, despite their initial awareness that patients would be rating their performance following the consultation.

Implications

Male and female gender roles may hold implications for the roles that couple members' perceive themselves and their partner to occupy in sub-fertility medical consultation. These roles may further be influenced by the focus of sub-fertility investigations and treatments. As such couple members may be seen to involve themselves within the consultation to different extents and expect and perceive different

aspects of the consultation as applicable to their role. This may affect the engagement of the different couple members by clinicians, with partners being observed to engage well in those aspects that are perceived as concordant with their role. However, this may potentially create conflict within the consultation triad (Lalos, 1999), such as if one partner needs to be engaged in an aspect of the sub-fertility process, which they do not consider part of their role. It is therefore important to understand the roles that couple members' perceive themselves to hold in sub-fertility medical consultation and the influence that this has upon their expectations and involvement in this context.

The expectations of sub-fertile couple members and the meeting of these may also hold implications. Couple members reported low expectations for 'support' from the consultation and lower rates of having their 'explanation & understanding' expectations met. It may be beneficial for discussions about what couple members expected from the consultation to be held at the start of the consultation so that the content could be negotiated and unrealistic expectations resolved, thus enabling couple members' desires to be better met.

Couple members reported being unaware of the functions and process of the clinic, which left them unsure as to what to expect when attending appointments. An implication from this may be for a leaflet to be developed detailing what services are offered for couples at the clinic and the stages through which treatment may progress. This could be distributed to couples with their initial appointment letter and would help to provide couples with information about what to expect during their attendance at the clinic and prepare any questions that they may have regarding their investigations an treatment.

Future research

Several important areas for future research to consider can be proposed. Firstly, the development of a measure of expectations specific to medical consultation within a

sub-fertility clinic would be beneficial to assess what couple members expect to receive and identify whether there are any gender differences in these expectations.

Similarly, further measurement of male and female sub-fertile couple members' perceptions of the amount of interaction that they and their partner have with a Consultant during consultation would be beneficial to support or refute the findings of the current study and provide additional knowledge about patients' experiences of medical consultation within this setting.

The quantitative research methods used within this study are limited in that they do not provide information on factors underlying participants' responses. Qualitative research may be beneficial in exploring factors postulated within the discussion, which may influence sub-fertile couple members' expectations and perceptions of medical consultation, such as gender, social and cultural factors and previous experiences of healthcare services (Sofaer & Firminger, 2005).

Finally, studies containing sub-fertile couple members of different ethnicities and studies including equal numbers of couples experiencing each different sub-fertility diagnosis would enable investigation of these factors in the development of expectations and perceptions of medical consultation.

Conclusions

Taking the results in their entirety they seem to suggest that couple members' expectations for medical consultation within a sub-fertility setting are similar to those already found within different medical settings (McGowan, et al., 1999; Price, et al., 2006; Warwick, et al., 2004). However, the influence of couple members' previous experiences of medical consultation and the development of expectations from these (Williams, et al., 1995) must be considered, as well as patients' uncertainty about the functions of a specialist sub-fertility clinic. The study's results both for couple members' expectations and perceptions of sub-fertility medical consultation suggest a

potential influence of gender role differences between males and females, which may be further reinforced by the focus of sub-fertility investigations and treatment. Gender role differences may be considered to influence sub-fertile couple members' perceptions of the relevance of aspects of the consultation to them and the subsequent role that they undertake during the process of sub-fertility medical consultations. Research of patient expectations and perceptions of medical consultation within a sub-fertility setting is limited, despite its importance within health care. This study represents an initial attempt to understand these concepts and their subsequent implications within a sub-fertility setting. Further research is required to develop these initial findings and the understanding of couple members' expectations and perceptions of sub-fertility medical consultation.

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Part Three

Appendices

Appendix A: Reflective Statement.

Reflective statement

Whiteford & Gonzalez (1995) used the term "emotional rollercoaster" to describe the experiences of couple members through the different stages of sub-fertility from their initial difficulties conceiving through to treatment success or failure. All the stages are accompanied by feelings of anxiety, frustration, hope, disappointment and dejection (Jordan & Revenson, 1999). In progressing through the portfolio I have come to consider its completion to follow a similar set of stages to those seen within sub-fertility, from the initial conception of a research idea, seeking further information and guidance from a more knowledgeable 'other' to design the research, conducting the research, analysing and forming conclusions about the results through to writing up the portfolio and achieving one's goal. Similarly, the different stages of the portfolio have been accompanied by feelings of anxiety, frustration and dejection. Managing these feelings in order to negotiate and progress through the different stages has posed many challenges on a both a personal and academic level.

Personally, the management of these feelings did, at times, hinder progression and stretched my capacity to cope. At these times it was necessary to take stock of what had been achieved and how this had been done, in order to reappraise the situation and use the lessons learnt at that time to evaluate what was still to be achieved and how this could be done. It was useful to reflect upon the psychological processes that were affecting my ability to progress through the stages of the portfolio during supervision and to develop the mantra "fuss less do more." I have recited this to myself at those points when I felt overwhelmed by the anxiety of completing parts of the portfolio and getting them 'right' first time. I wasn't always successful "first time" but as the portfolio has progressed it has been beneficial to recognise the way of working that is best for me and to be more accepting of this.

Academically, the analysis of the empirical results was very challenging and anxiety provoking. The analysis was more complex than originally thought and used some methods that I had not previously encountered. This required me to spend a lot of hours reading and trying to understand "why". At this time the progress of the research felt frustratingly slow and like it may never reach an adequate conclusion. Despite this, reflecting upon the data analysis stage of my empirical paper now, I do consider that I have a much better understanding of the reasons why different statistical methods are used between data sets and how to assess which method is most appropriate for one's data. It is fair to say that most of this would not have been possible without the "hiccup" in my data analysis.

My empirical research required me to spend a lot of time in a sub-fertility clinic to access participants. Initially, this time felt quite demoralizing as low numbers of patients were available to sample from, nurses were busy and unavailable to help recruit participants at times and patients were unable to complete the post consultation measures due to external reasons. However, as the research progressed I actually came to really enjoy and value the time I spent at the clinic. In reflecting upon what altered to cause this change, I considered the relationships that I built with nursing staff and the Consultant by consistently spending time at the clinic each week, helping out with small tasks at the clinic and being prepared to discuss my research, other psychological concepts and ask questions about the clinic to gain an understanding of the way it worked. All of these things helped me "recruit" staff to my research, which in turn helped me to recruit participants and retain them post consultation through the nurses' and Consultant's help. I particularly enjoyed conversing with nurses and the Consultant about psychological concepts and gaining an insight into how medical professionals understood psychological concepts and viewed aspects of a person's presenting problem. Considering this has led me to carefully think about how other health

professionals understand and use psychological concepts within their work, how to communicate with other health professionals about psychological concepts and to think about how to integrate the medical and psychological understandings of a presenting problem and associated factors more holistically for both professions to intervene more effectively. I will carry these experiences and reflections forward into both my future research and clinical duties.

In reflecting upon the conduction of the research at the clinic it was observed that the majority of male couple members would only voice their agreement to participate once their partner had. In addition, a number of male couple members reported feeling unable to complete the PIQ, as they didn't feel that they had a problem and were there to support their partner. A number of males were also concerned that their low ratings of the Consultant's interaction with them looked bad, despite them reporting that they did not feel unhappy that they did not get much interaction, as they considered their role to be that of supporting their partner. It was interesting to think about these observations and participant comments in conjunction with the study's research questions. This raised questions about the way that male couple members conceptualized their own and their female partners individual roles and purposes at the clinic and what males believed about their entitlement to voice their views and needs like their female partner. It was thought that if males conceptualized their role at the clinic as to support their partner that they may feel less entitled to express their own needs and views and as such feel less involved in the interactions in the consultation. Whereas if they felt they had a similar role to their partner they may feel more entitled to express their needs and views and feel more of an equal member of the interactions during the consultation.

Furthermore, when filling out the questionnaires participants provided unprompted feedback about them. This feedback suggested that the expectations

questionnaires might not be completely appropriate for a sub-fertility population. Participants suggested that some of the questions seemed out of context and did not fit with their ideas/ previous experiences of sub-fertility consultation. This may have affected the responses provided by the participants and the expectations shown for sub-fertile couples by the study. This led me to consider the complexity of measuring expectations and perceptions and the pros and cons of both quantitative and qualitative designs. It was considered that both designs had pros and cons but that quantitative assessment was potentially the most adequate first step in the assessment of couple members' perceptions of a sub-fertility medical consultation, as this had not been assessed before, thus providing an idea of how couple members perceive consultation.

Despite the difficult process of the research and the limitations observed in some of the measures by participants I have learnt a lot about the experience of sub-fertility from the perspective of male and female couple members and aspects of medical consultation within this setting. Two of the most interesting results for me were (i) the low support expectations and (ii) the low interaction ratings for male couple members' interactions with the doctor. These findings raised a lot of questions for me about the roles and purposes of couple members attending a sub-fertility clinic, couple members' perceptions of their own and their partner's role and purpose at a sub-fertility medical consultation, factors in the development of our perceptions and expectations and the prevalence of the medical model.

When considering the purpose and roles as conceptualised by couple members at the sub-fertility clinic I thought about the primary reason that people attended the clinic, which was to conceive a child, and the treatment that this involved. This was considered to be very medically driven by treatments proven to help couples achieve their goal, which lacks of consideration of the psychosocial aspects of the presenting problems. Couple members may not consider support important from the medical consultation as

they receive it in their relationship, their only goal is to achieve conception and their previous experiences of medical consultation have led them to expect that emotional aspects will not be covered. It may also be that couple members do not want to show the emotional strain of trying to conceive, as they may believe that this may delay or even halt their treatment until it is resolved. Fertility and the bearing of children is largely considered part of the female identity and sub-fertility treatments may further reinforce this through their focus. It was reflected that this may influence how males see their role. I also wondered whether this led male partners to feel quite external to the process, which may further be reinforced by the extent that they are included in the consultations. All of these experiences and perceptions may be influential upon the formation of expectations about the consultation and male partners' feelings about their entitlement to voice their concerns or views about the problem. In my thinking it is clear that the roles of male and female sub-fertile couple members during, and reasons for attending for, medical consultation require further exploration and consideration to understand the influence of the stereotype that fertility and child-bearing is only a concern for females and improve the experience for both couple members.

Despite the rollercoaster nature of the research process I have come to view the "end product" as very interesting and useful in developing my thoughts around many different aspects, not only those related to the topics being researched within the study, but also the wider context of health care services, patient experiences and psychology.

This experience has taught me that research is a much longer process and has many more challenges to overcome than originally thought, but that it can be very rewarding when you are able to sit back and consider the 'end product' in its entirety and the process that made it possible.

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Appendix B: Journal Choice.

I chose to submit the systematic literature review to the Journal of Social Science & Medicine. I wanted to submit this article to a multidisciplinary journal because it may be useful for health professionals from a variety of disciplines, including doctors, nurses, psychologists and counselors, to be aware of the coping strategies used by sub-fertile couple members and the affect of intra-couple coping concordance and discordance upon fertility related distress. An understanding of these topics may assist health professionals in supporting sub-fertile couple members and managing their healthcare. The journal has a large impact factor of 2.604, as measured in 2009. I also considered it important that this journal publishes literature reviews.

I chose to submit the empirical paper to the Journal of Social Science & Medicine. The Journal was chosen due to its high impact factor of 2.604, as measured in 2009, and the word count of 8,000 words for original research. The journal further seemed appropriate due to its coverage of health related topics from different social science perspectives. This would allow the study's findings about sub-fertile couple members' expectations and perceptions of medical consultation to be discussed from a psychological perspective whilst also considering the implications of the findings for the couples' medical care. The journal has a multi-disciplinary readership enabling the dissemination of the research findings to different health professionals who may be involved with the care of sub-fertile couples.

Appendix C: Author Guidelines for the Journal of Social Science & Medicine.

Guidance for authors: Journal of Social Science & Medicine

1. Full papers – Original research reports or critical reviews of a field may be up to 8,000 words including abstract, tables, figures, endnotes and references as well as the main text. The editors are prepared to consider longer papers in exceptional cases, though justification for this must be made at submission by the author.
2. The article must comprise original unpublished material.
3. Submissions should be double-spaced and use between 10 and 12pt font, any track changes must be removed.
4. Abstract – Of up to 300 words must be included in the manuscript. The abstract must be able to stand alone. It should briefly state the purpose and setting of the research, the principal findings and major conclusions, and the paper's contribution to knowledge. For empirical papers the country/ countries/ locations of the study should be clearly stated, as should the methods and nature of the sample, and a summary of the findings/ conclusion.
5. Keywords – Up to 8 keywords are entered separately into the online editorial system during submission, and should accurately reflect the content of the article.
6. The main body of the manuscript should follow this order: abstract, main text, references, appendix, figure captions, tables and figures. Do not place tables or figures in the main text.
7. Use a concise and informative title.
8. The word count should include all text, including that in the tables, figures and references, etc.
9. Charts and diagrams - Should be referred to as "Figure(s)" and should be numbered consecutively in order to which they are referred. They should accompany the

manuscript but should not be included within the text. All figures should have a caption.

10. Tables - Should be numbered consecutively and given a suitable caption and if possible provided at the end of the same file as the main text. Footnotes to tables should be typed below the table and should be referred to by superscript lowercase letters. Tables should not duplicate results presented elsewhere in the manuscript (i.e. in graphs).

Appendix D: Rationale for the inclusion and exclusion criteria used within the systematic literature review.

Inclusion/ Exclusion criteria	Rationale
"Inability to conceive after 12-months of regular unprotected sexual intercourse" (Cousineau & Domar, 2007) as the criterion for primary sub-fertility.	• This is the medical definition used within the research literature to define primary sub-fertility.
Heterosexual couples with primary sub-fertility, from different diagnoses, who were at different stages of treatment.	• Homosexual couples and those experiencing secondary sub-fertility have been proposed to experience further issues with regards to their experience of sub-fertility, which may lead to differences in the distress experienced and the subsequent strategies used to cope when compared to heterosexual couples and those experiencing primary sub-fertility. • There is a larger literature base investigating the coping and sub-fertility related distress of heterosexual couples experiencing primary sub-fertility. • There are a number of different diagnoses possible for the origin of sub-

	fertility, research has suggested differences in the impact of some of these diagnosis upon male and female sub-fertile couple members. It cannot be assumed that the different diagnoses are homogenous in the sub-fertility related distress that they produce and the coping strategies that are employed to cope with them. Different diagnoses were therefore investigated to explore whether there were similarities or differences in the distress produced for sub-fertile couple members and the subsequent coping strategies that they employed. • The experience of sub-fertility related distress and the subsequent strategies used to cope have been suggested to vary over the different stages of investigation and treatment.
Assessments of both male and female coping strategies and fertility problem stress.	• The review is investigating the impact of coping both at the individual and couple levels upon sub-fertility related distress. Therefore both male and female partners' coping and experience of distress needed to be measured by

	the research included to draw conclusions about individuals' coping and distress and potential similarities and differences within couples and between partners/ genders.
Not printed in English.	• The articles could not be translated into English due to time and financial constraints.
Literature reviews, meta-analyses, case studies, dissertations and theses.	• Time constraints to complete the literature review and the potential accessibility of dissertations and theses were considered when deciding to exclude these forms of research. • The limited generalisability of the findings of these different forms of research were also considered when excluding these forms.

Table 1: Rationale for the inclusion and exclusion criteria for article selection within the systematic literature review.

References

Cousineau, T. M., & Domar, A. D. (2007). Psychological impact of infertility. *Best Practice & Clinical Obstetrics and Gynaecology, 21*(2), 293 - 308.

Appendix E: Quantitative and Qualitative Study Quality Assessment Checklists.

Quantitative Research Quality Checklist	
Paper title:	
Author (s):	
Date:	Journal:

Quality assessment questions	**Quality rating**
Clearly focused research question/ aims	Yes/ No/ Unsure
Clearly focused rationale/ hypotheses	Yes/ No/ Unsure
Main outcomes to be measured stated and clearly defined	Yes/ No/ Unsure
Design clearly outlined	Yes/ No/ Unsure
Participants • Participants demographics stated • Inclusion and exclusion criteria stated • Sample representativeness to the population being assessed • Participation rate/ drop out rate reported	 Yes/ No/ Unsure Yes/ No/ Unsure Yes/ No/ Unsure Yes/ No/ Unsure
Reliability and validity of measures used reported	Yes/ No/ Unsure
Methodology • Time course of the study reported • Sampling strategy reported	 Yes/ No/ Unsure Yes/ No/ Unsure
Ethical approval reported	Yes/ No/ Unsure
Data analysis • Data analysis strategy reported • Data analysis appropriate to data collected • Confidence intervals reported	 Yes/ No/ Unsure Yes/ No/ Unsure Yes/ No/ Unsure
Main findings clearly reported	Yes/ No/ Unsure
Main conclusions relate to main question	Yes/ No/ Unsure
Limitations/ implications of study reported	Yes/ No/ Unsure

Qualitative Research Quality Checklist	
Paper title:	
Author (s):	
Date:	Journal:

Quality assessment questions	**Quality rating**
Clearly focused research question/ aims	Yes/ No/ Unsure
Clearly focused rationale/ hypotheses	Yes/ No/ Unsure
Qualitative methodology most appropriate	Yes/ No/ Unsure
Underpinning values and assumptions discussed	Yes/ No/ Unsure
Participants • Participants demographics stated • Inclusion and exclusion criteria stated • Sample representativeness to the population being assessed • Participation rate/ drop out rate reported	 Yes/ No/ Unsure Yes/ No/ Unsure Yes/ No/ Unsure Yes/ No/ Unsure
Methodology • Time course of the study reported • Sampling strategy reported • Data collection methods reported	 Yes/ No/ Unsure Yes/ No/ Unsure Yes/ No/ Unsure
Ethical approval reported	Yes/ No/ Unsure
Data analysis • Data analysis strategy reported • Data analysis appropriate to data collected • More than one rater	 Yes/ No/ Unsure Yes/ No/ Unsure Yes/ No/ Unsure
Main findings coherent/ valid/ relevant	Yes/ No/ Unsure
Main conclusions relate to main question	Yes/ No/ Unsure
Limitations/ implications of study reported	Yes/ No/ Unsure

Appendix F: Quantitative and Qualitative Study Data Collection Pro-formas.

Quantitative studies data collection pro-forma									
Author and date	Study design	Research aims/ hypotheses	Number of participants	Participant demographics	Distress measure used	Coping data collected	Analysis	Main findings	Comments

Qualitative studies data collection pro-forma								
Author and date	Aims of the study	Study design	Number of participants	Participant demographics	Analysis	Themes	Main findings	Comments

Appendix G: Quantitative and Qualitative Studies Quality Assessment Ratings.

Author(s) & date	Focused research question/ aim	Focused rationale/ hypotheses	Main outcomes to be measured clearly defined	Design outlined	Participant demographics	Inclusion and exclusion criteria	Sample representativeness	Participant drop out/ response rate	Reliability & validity of measures used	Time course reported	Sampling strategy reported
{Abbey, 1991 #3}	*Yes*	*Yes*	*No*	*Unsure*	*Yes*	*Yes*	*Yes*	*No*	*Yes*	*No*	*Yes*
{Stanton, 1992 #70}	*No*	*Yes*	*No*	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*No*	*Yes*
{Daniluk, 2007 #69}	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
{Peterson, 2006 #47}	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
{Kraaij, 2008 #87}	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	*Unsure*	*Yes*	*Yes*	*Yes*	*Yes*
{Peterson, 2009 #66}	*Yes*	*Yes*	*Yes*	*Unsure*	*Yes*	*No*	*Unsure*	*Yes*	*No*	*Yes*	*Yes*
{Peterson, 2008 #67}	*Yes*	*Yes*	*Yes*	*No*	*Yes*	*No*	*Unsure*	*Yes*	*No*	*Yes*	*Yes*
{Levin, 1997 #71}	*Yes*	*Yes*	*Unsure*	*No*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*No*	*Yes*
{Stanton, 1992 #88}	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	*No*	*Yes*

Table 1: Quality assessment ratings for quantitative studies

Author(s) & Date	Ethical approval reported	Data analysis strategy reported	Data analysis appropriate	Confidence intervals reported	Main findings clearly reported	Main conclusions relate to the question	Limitations/ implications of study reported	**Quality rating raw score**
{Abbey, 1991 #3}	*No*	*No*	*Yes*	*No*	*Yes*	*Unsure*	*Yes*	***10***
{Stanton, 1992 #70}	*No*	*Unsure*	*Unsure*	*No*	*Yes*	*Yes*	*No*	***8***
{Daniluk, 2007 #69}	*No*	*Yes*	*Yes*	*No*	*Yes*	*Unsure*	*Yes*	***15***
{Peterson, 2006 #47}	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	***16***
{Kraaij, 2008 #87}	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	***14***
{Peterson, 2009 #66}	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	***12***
{Peterson, 2008 #67}	*No*	*Yes*	*Yes*	*Unsure*	*Yes*	*Yes*	*Yes*	***12***
{Levin, 1997 #71}	*No*	*Yes*	*Yes*	*No*	*Unsure*	*Yes*	*Yes*	***12***
{Stanton, 1992 #88}	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	***13***

Table 1: continued

Author(s) & Date	Focused research question/ aim	Focused rationale/ hypotheses	Qualitative method most appropriate	Underpinning values and assumptions discussed	Participant demographics reported	Inclusion and exclusion criteria reported	Sample representativeness assessed	Participation/ drop out rate reported	Time course reported
{van Rooij, 2009 #72}	*Yes*	*No*	*Yes*	*No*	*Yes*	*Unsure*	*Unsure*	*Yes*	*No*
{Phipps, 1993 #74}	*Yes*	*No*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	*No*	*No*

Author(s) & Date	Sampling strategy reported	Data collection methods reported	Ethical approval reported	Data analysis strategy reported	Data analysis most appropriate	More than one rater	Main findings coherent/ relevant	Main conclusions relate to research questions	Limitations/ implications reported	**Quality rating raw score**
{van Rooij, 2009 #72}	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	***12***
{Phipps, 1993 #74}	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	***13***

Table 2: Quality assessment ratings for qualitative studies

Appendix H: Patient Intentions Questionnaire (PIQ) and Expectations Met Questionnaire (EMQ).

How were the PIQ and EMQ chosen?

Previous research was searched for measures assessing patient expectations of medical consultation, both within general medical practice and more specifically within sub-fertility. No measures of patient expectations specific to sub-fertility medical consultation were found. A small number of measures of patient expectations within primary care were found. Upon closer examination of these measures a quantitative approach was decided upon as this would enable a quick but comprehensive assessment of patients' expectations and was the predominant methodology used within this research field. Due to the absence of measures of patient expectations within secondary care and sub-fertility it was decided that a measure used and validated within primary care should be implemented in the current study to provide an initial impression of patients' expectations within sub-fertility. The data gathered from the use of this within the current research may then further provide an insight into how patients' expectations differ between primary and secondary care services, further enabling the development of a measure of patient expectations specific to secondary care medical consultation.

From the search of measures used within previous studies the PIQ and EMQ were deemed the most appropriate to use within the current study for a number of reasons. Firstly, the measures had been used and developed within a number of studies within primary care, as such they were considered to be reliable and valid measures of patients' expectations. Secondly, the PIQ and EMQ were developed in relation to each other within the research of Williams, et al., 1995. This allowed for patients' expectations of sub-fertility medical consultation to be assessed before they entered the medical consultation, helping to develop an idea of how patients conceptualised and understood the purpose of the sub-fertility clinic and the care provided there, and the assessment of whether patients felt that their previous

expectations had been met by the consultation through the comparison of their scores on the EMQ to those on the PIQ, thus giving a further idea of whether patients conceptualisation of sub-fertility medical consultation may have altered as a result of the consultation. Finally, the PIQ and EMQ investigated patient expectations of medical consultation along a number of dimensions, which whilst developed within primary care were deemed applicable to medical consultation within secondary care and at a specialist sub-fertility clinic.

Examples of the PIQ and EMQ used within the current study can be found below.

Patient Intentions

Questionnaire

Here are some statements about what you want from the consultation with the doctor. **For each one,** please mark a number to show whether it applies to **your visit today.**

2 1 0	2 **1** 0	2 1 **0**
If you **agree** that it expresses your views about your visit today, **mark 2.**	If you are **uncertain** whether it expresses your views about your visit today, **mark 1.**	If the statement **does not** express your views about your visit today, **mark 0.**

PLEASE RESPOND TO EVERY STATEMENT SUBJECT NO: ☐☐☐☐

STATEMENT	Agree	Uncertain	Disagree	
1. I want the doctor to understand my problem.	2	1	0	☐
2. I want the doctor to explain what is wrong with me.	2	1	0	☐
3. I want to discuss certain problems in my life.	2	1	0	☐
4. I want a prescription for some medication I know will make me better.	2	1	0	☐
5. I want treatment for a nervous condition.	2	1	0	☐
6. I want help dealing with a medical problem.	2	1	0	☐
7. I want the doctor to explain my emotional problems.	2	1	0	☐
8. I am having a difficult with my problem and would like some support.	2	1	0	☐
9. I would like to be taken off some medication I have been taking.	2	1	0	☐
10. I want the doctor to explain how serious my problem is.	2	1	0	☐
11. I want the doctor to talk with me about my problem.	2	1	0	☐
12. I want some tests done to find out what is wrong with me.	2	1	0	☐
13. I want the doctor to explain why I feel the way I do.	2	1	0	☐
14. I would like to be referred to a female doctor.	2	1	0	☐
15. I want some advice on a marital/sexual problem.	2	1	0	☐
16. I am feeling anxious and would like the doctor's help.	2	1	0	☐

STATEMENT	Agree	Uncertain	Disagree	
17. I want the doctor to sympathise with me and my problem.	2	1	0	☐
18. I want to know how quickly I will get over this problem.	2	1	0	☐
19. I want to change the medication I am presently taking.	2	1	0	☐
20. I want the doctor to understand what I think is wrong.	2	1	0	☐
21. I would feel better if I was able to talk about some of my feelings.	2	1	0	☐
22. I want to be sure nothing is wrong with me.	2	1	0	☐
23. I want the results from some tests.	2	1	0	☐
24. I want advice about medical treatment.	2	1	0	☐
25. I want a previous diagnosis confirmed.	2	1	0	☐
26. I want advice about someone else who has a problem.	2	1	0	☐
27. I want to be referred to a specialist.	2	1	0	☐
28. I want advice on a drug I am taking.	2	1	0	☐
29. I want to know about possible side-effects of my problem.	2	1	0	☐
30. I have emotional problems for which I would like help.	2	1	0	☐
31. I want someone to comfort me at this difficult time.	2	1	0	☐
32. I want the doctor to explain the likely course of the problem.	2	1	0	☐
33. I want to be examined for the cause of my condition.	2	1	0	☐
34. I would like the doctor to tell me what the symptoms that I have mean.	2	1	0	☐
35. I want the doctor to explain the treatment I am having.	2	1	0	☐
36. I want the doctor to understand what treatment I think I need to get better.	2	1	0	☐
37. I want to know if I am likely to have any problems in the future.	2	1	0	☐
38. I want the doctor to explain some test results.	2	1	0	☐
39. I want the doctor to tell me if my problems are real or if I am imagining them.	2	1	0	☐
40. I want to know if my problems are related to other parts of my life.	2	1	0	☐
41. I want to know what is making me react the way I am.	2	1	0	☐
42. I want to be told about others who share my problem.	2	1	0	☐

EXPECTATIONS MET QUESTIONNAIRE

Here are some statements about what you obtained from the consultation with the doctor. **For each one, please circle a number to show whether it applies to your visit today.**

2 1 0	2 1 0	2 1 0
If you **agree** that it expresses your views about your visit today, **mark 2.**	If you are **uncertain** whether it expresses your visit today, **mark 1.**	If the statement **does not** express your views about your visit today, **mark 0.**

PLEASE RESPOND TO EVERY STATEMENT SUBJECT NO: ☐☐☐☐

STATEMENT	Agree	Uncertain	Disagree	
1. The doctor understood my problem.	2	1	0	☐
2. The doctor explained what is wrong with me.	2	1	0	☐
3. I discussed certain problems in my life.	2	1	0	☐
4. I have been given a prescription for some medication I know will make me better.	2	1	0	☐
5. I will receive treatment for a nervous condition.	2	1	0	☐
6. I was given help dealing with a medical problem.	2	1	0	☐
7. The doctor explained my emotional problems.	2	1	0	☐
8. I was given some support to deal with my problem.	2	1	0	☐
9. I have been taken off some medication I had been taking.	2	1	0	☐
10. The doctor explained how serious my problem is.	2	1	0	☐
11. The doctor talked with me about my problem.	2	1	0	☐
12. Some tests were done to find out what is wrong with me.	2	1	0	☐
13. The doctor explained why I feel the way I do.	2	1	0	☐
14. I am to be referred to a female doctor.	2	1	0	☐
15. I was given some advice on a marital/sexual problem.	2	1	0	☐
16. I was feeling anxious and received the doctor's help.	2	1	0	☐
17. The doctor sympathised with me and my problem.	2	1	0	☐

STATEMENT	Agree	Uncertain	Disagree	
18. I now know how quickly I will get over this problem.	2	1	0	☐
19. I changed the medication I had been taking.	2	1	0	☐
20. The doctor understood what I thought was wrong.	2	1	0	☐
21. I feel better since I was able to talk about some of my feelings.	2	1	0	☐
22. I am now sure nothing is wrong with me.	2	1	0	☐
23. I received the results from some tests.	2	1	0	☐
24. I was given advice about medical treatment.	2	1	0	☐
25. I had a previous diagnosis confirmed.	2	1	0	☐
26. I was given advice about someone else who has a problem.	2	1	0	☐
27. I have been referred to a specialist.	2	1	0	☐
28. I was given advice on a drug I am taking.	2	1	0	☐
29. I now know about possible side-effects of my problem.	2	1	0	☐
30. I have emotional problems for which I received help.	2	1	0	☐
31. I was comforted at this difficult time.	2	1	0	☐
32. The doctor explained the likely course of the problem.	2	1	0	☐
33. I was examined for the cause of my condition.	2	1	0	☐
34. The doctor told me what the symptoms that I have mean.	2	1	0	☐
35. The doctor explained the treatment I am having.	2	1	0	☐
36. The doctor understood what treatment I thought I needed to get better.	2	1	0	☐
37. I now know if I am likely to have any problems in the future.	2	1	0	☐
38. The doctor explained some test results.	2	1	0	☐
39. The doctor told me whether my problems were real, or if I had been imagining them.	2	1	0	☐
40. I now know if my problems are related to other parts of my life.	2	1	0	☐
41. I now know what is making me react the way I am.	2	1	0	☐
42. I was told about others who share my problem.	2	1	0	☐

Appendix I: Development of the Patient Perceptions of the Consultation Experience (PPoCE) questionnaire.

Development of the Patient Perceptions of the Consultation Experience (PPoCE) questionnaire

Introduction

Medical consultation is considered to be the primary medium through which a doctor and patient collect and exchange information about a set of problems and decide upon a course of action (Williams, Weinman, Dale, & Newman, 1995). The interaction further comprises interpersonal aspects in which the doctor extends support and empathy to the patient and a trust develops between the two parties (Street Jr., 1992). The performance of a doctor within medical consultation has been proposed to effect a patients' health outcomes both in the short and long-term (Lipkin, 1996). It has been reported that the extent to which patients perceive doctors to engage in informational exchange, facilitation of patient involvement in decision-making and expression of emotional concerns has positive affects upon a patients adherence to medical treatment, physical and emotional well-being and satisfaction with the overall consultation experience (Street Jr., 1992). As such patient perceptions have been considered to play an important mediating role in influencing the outcomes of consultation (Smith, Winkel, Egert, Diaz-Wionczek, & DuHamel, 2006). The mechanisms, development and influence of patient perceptions are still little understood within research literature.

One issue that may be proposed to influence the understanding and conceptualisation of patient perceptions is the lack of a clear definition within the literature. Perception is defined within the dictionary as the "the awareness of the external world or some aspect of it through physical sensations and the interpretation of these by the mind" and "any insight, intuition or knowledge gained by perceiving" (Digest, 1987). However, a definition within the research literature reviewed was not found. It was further noted from the review that the term satisfaction was a dominant focus of research utilising patient perceptions. Within the context of the satisfaction

literature patient perceptions of medical consultation were reported to result in the extent to which patients felt satisfied with the consultation, but patient perceptions as a concept remained undefined (Haddad, Potvin, Roberge, Pineault, & Remondin, 2000; Harding, Parajuli, Johnston, & Pilotto, 2010).

Difficulties have further been encountered in the measurement of patient perceptions within the research literature. Firstly, the measurement of perceptions of medical consultation have differed between studies in whose perceptions are assessed, as perceptions of patients and/or doctors have been measured within different studies (Smith, et al., 2006). Perceptions are subjective and are determined by an individual's previous experiences of medical consultation and their expectations of medical services as a result of this (Sofaer & Firminger, 2005). Street Jr (1992) has proposed that the assessment of perceptions from only an individual's point of view does not provide information upon the behaviours actually engaged in by the doctor during the consultation. Street Jr. (1992) recommends the use of an objective measure of medical consultation behaviours to assess the accuracy of patient's perceptions.

Questions regarding the most appropriate method to measure patient perceptions have been raised within the research literature (Street Jr., 1992). Research has primarily utilised questionnaires about the different aspects of medical consultation which patients have been asked to rate on a Likert scale immediately following consultation. A problem with this method, which has been proposed, is the dimensions upon which the items are being rated as some questionnaires utilise a scale that reflects how much an item was engaged in by the doctor during a consultation whilst other scales assess the extent to which patients were happy with the engagement of the doctor in different behaviours (Street Jr., 1992).

Most of the research methods previously reported have been quantitative measures of perceptions however the qualitative nature of perceptions have further been

considered to be important to assess in order to understand the development and influence of patient perceptions (Smith, et al., 2006). Street Jr (2006) has suggested that patients' perceptions are both quantitative and qualitative. Examining the qualitative aspects of perceptions may reveal some of the intricacies about pre-disposing and precipitating factors in the development of the different perceptions, individual and contextual differences in the expression of perceptions between different situations, and how the qualitative aspects of perceptions relate to the quantitative dimensions of perceptions.

Within the literature reviewed patient perceptions were most often assessed within general practice settings (Harding, et al., 2010). A few studies had been conducted within more specialist settings but these studies were mainly located in specialist oncology clinics (Street Jr., 1992). One study utilised qualitative interviews to provide some insight into patient perceptions of sub-fertility treatment (Blenner, 1992), but this did not assess the patient perceptions about the specific behaviours displayed by the doctor during a sub-fertility medical consultation.

In considering the literature reviewed, the specialist medical setting of the study and the research questions to be answered it was decided that it would be beneficial to develop a questionnaire. The questionnaires construction would take into account the context of the study and the specific research questions posed relating to patient perceptions, whilst also bearing in mind the benefits and limitations of the different approaches for measuring perceptions already stated within the research literature.

Scoping search of previous research into patient perceptions

A scoping search was conducted to assess the availability of questionnaires already utilised in previous research upon perceptions of medical consultation. The findings of the scoping search suggested that there was no one accepted method for measuring perceptions of medical consultation and that those methods currently being

employed each had their own benefits and limitations. Specifically within a sub-fertility setting patients' perceptions had been assessed qualitatively (Blenner, 1992) but this had not specifically assessed patients' perceptions of the doctors' behaviours during the medical consultation or whether there were differences between the perceptions of male and female couple members of the amount of interaction that they each had with the doctor.

Questionnaire design

In line with the previous research literature it was decided that a questionnaire would provide the best means of assessing the perceptions of male and female couple members at the sub-fertility clinic. Following discussions with the Consultant and observations of the process of the sub-fertility clinic and the format of the consultations it was decided that the questionnaire would require three parts to assess patient perceptions within this setting and to incorporate the guidance from the literature and measures of patient perceptions already in use.

The construction of the first section of the questionnaire

The first section of the questionnaire was developed as a list of statements following the structure previously set by a perceptions measure already in use within the research literature (Kenny, 1995). The researcher developed a list of statements focused upon the doctors' behaviours during the consultation, the measure previously developed by Kenny (1995) was a key document used in the process of developing this list of statements and their structure.

The statements included in the questionnaire were developed in line with the themes of aspects of medical consultation shown within the research literature upon medical consultation and patient perceptions, including informational exchange, involvement in decision making, patient-centered care in terms of interpersonal sensitivity and emotional support, and trust in the doctor's skills and competency,

(Street Jr., 1992). It was felt important to continue to use these themes within the current study's questionnaire as they had been consistently assessed within the previous literature regarding perceptions of medical consultation and had been found to be important aspects in both general practice and more specialist medical settings.

Statements were to be rated by participants upon a five point rating scale (strongly disagree to strongly agree) to show the extent to which they agreed with the statements. The statements were worded to state that the doctor did or did not engage in the behaviour in the statement.

In order to assess the allocation of the different statements, to the different themes of aspects of medical consultation, the researcher distributed the first section of the questionnaire to their peers and a section of the general public. The 46 participants who responded were asked to state which theme heading they thought each statement upon the questionnaire would fit under best, each statement could go under one theme heading only. The final placement of the statements under the most appropriate theme headings, as found from the results of the 46 participants, is depicted in Table 1.

Theme heading	Statements
Data gathering to understand the patient(s) and their problem(s)	6, 15, 23, 24, 37
Patient-centered behaviour	2, 7, 8, 9, 10, 11, 12, 13, 18, 19, 20, 21, 25, 26, 28, 29, 30, 31, 33, 34, 36, 19
Interpersonal sensitivity	3, 4, 5, 14, 16, 27, 32
Physician attributes	1, 17, 22, 35

Table 1: The placement of statements from the first section of the PPoCE under corresponding theme headings

The construction of the second and third sections of the questionnaire

In accordance with the guidance of the patient perceptions literature (Smith, et al., 2006) the second section of the questionnaire was developed to allow for more qualitative answers to be received from participants in order to provide further insight into the patients' perceptions and potential bases for these. It was decide that the questionnaire would include a qualitative component rather than conducting an interview with participants, as an interview would require participants to be interviewed after the consultation, which may lower participation rates because of practical and emotional reasons, such as the length of time it may take, participants needing to leave the clinic soon after their appointment to return to work, the amount of clinic space available to conduct the interviews in and the distress experienced by participants as a result of information received during the consultation. A qualitative component to the questionnaire was thought to help alleviate some of these difficulties and lessen the affect of others. Participants were to be asked about aspects of the consultation they

found helpful and unhelpful, whether there was anything that they wished to be covered during the consultation that was not and if they were able to ask the doctor questions and how the doctor responded.

The third and final section of the questionnaire was specifically designed to address the research question posed within the current study about whether male and female couple members' perceptions of the amount of interaction they and their partner had with the doctor differed. Discussions about the best way to assess this were had between the researcher and their supervisor. A number of different methods including a Likert scale and a visual analogue scale were thought about in order to represent the extent that couple members perceived the amount of interaction that they and their partner had Consultant to be similar and/or different. However, both methods were felt to not provide enough detail about each partner's perceptions of the amount of time that they perceived themselves and their partner to spend interacting with the Consultant. As such it was decided that percentage ratings would be the most appropriate method to assess the amount of interaction perceived by couple members. Discussions were had as to the perceptions of interaction that would be most useful to answering the research questions posed and as such it was decided that the perceptions of each participant should include percentages for the amount of interaction they perceived themselves and their partner to have with the doctor as individuals and them both together as a couple. Perceptions of amount of interaction the individual and their partner had with the doctor around different aspects of medical consultation, as suggested previously in the literature and utilised within the first section of the questionnaire, were assessed including, information and decision-making, improvement of understanding of the problem and addressing emotional concerns.

The final version of the PPoCE can be found in Appendix J.

Within this study only couple members' data from section three of the questionnaire was analysed and used and the study also had a small sample size. Both of these factors meant that the internal consistency and the loading of factors upon the sub-scales of section one of the questionnaire were not assessed.

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Appendix J: The Patient Perceptions of the Consultation Experience (PPoCE) questionnaire.

Patient Perceptions of the Consultation Experience questionnaire

Below are a series of statements about medical consultations and doctors. Thinking about the medical consultation that you have just experienced would you please rate the following statements using the five point rating scale given below.

1 Strongly disagree	2 Disagree	3 Neither agree or disagree	4 Agree	5 Strongly agree

Please write your ratings for each of the statements on the line next to the statement.

1) The doctor was polite and warm _____
2) The doctor explained the purpose of the consultation _____
3) The doctor acknowledged how I was feeling _____
4) The doctor recognized I was nervous and took time to calm me down _____
5) The doctor appeared interested in my concerns about the problem _____
6) The doctor asked me questions about the effect of the problem on aspects of my personal and social life _____
7) The doctor provided me with the chance to ask questions _____
8) The doctor answered the questions that I had _____
9) The doctor answered my questions fully _____
10) The doctor explained things in a way that I could understand _____
11) The doctor provided me with relevant information _____
12) The doctor was happy to explain anything that I didn't understand _____
13) The doctor listened to what I had to say _____
14) The doctor treated my concerns about the problem seriously _____
15) The doctor asked me lots of questions about the problem(s) _____
16) The doctor asked me how I was feeling _____
17) I was satisfied with the doctor's level of expertise _____
18) The doctor looked at me when talking to me _____
19) The doctor looked at me when I spoke _____

20) The doctor asked me for my view _____

21) The doctor listened to me _____

22) The doctor acted professionally throughout the consultation _____

23) The doctor collected information from me about my medical history _____

24) The doctor asked me questions about my previous sexual relationships _____

25) The doctor provided me with my test results _____

26) The doctor explained what my test results showed and what that meant _____

27) The doctor addressed me _____

28) The doctor explained what the next stage of treatment would be and what this would entail _____

29) The doctor included me in treatment decisions _____

30) The doctor made the decision to book further tests/ treatment without including me in the decision _____

31) I was comfortable with the layout of the room _____

32) I felt comfortable talking to the doctor about my personal problems _____

33) The doctor used medical language to explain my problem _____

34) The doctor explained my problem in plain English _____

35) I trusted the doctor _____

36) I was able to understand what the doctor told me during the consultation _____

37) The doctor asked me questions relevant to the purpose of the consultation _____

38) The doctor asked me questions about my family's medical history _____

39) The doctor provided me with useful information and explanations about my problems _____

The next set of questions require you to write an answer based upon what you experienced during the consultation that you have just been involved in. Could you please write your answer in the space provided underneath each question.

1) What aspects of the consultation did you find helpful?

2) What aspects of the consultation did you find less helpful?

3) Was there anything that you would have liked to have been covered during the consultation that was not? (Please circle)
   Yes/ no

   If yes, what were these things?

4) Did you feel able to ask the doctor questions? (Please circle)
   Yes/no

   If yes, how did the doctor respond?

   If no, what was it that made you feel unable to ask?

The final set of questions for this questionnaire is related to your perceptions of your experience of consultation and your perceptions of your partner's experience of the same consultation. Below are a list of questions. For each question would you please write an answer for yourself, an answer for how you think you partner felt, and an answer for how you think you felt together as a couple. Please could you write your answers out of 100%.

1) How much of the consultation do you feel that the doctor spoke to you? _____%
2) How much of the consultation do you feel that the doctor spoke to your partner? _____%
3) How much of the consultation do you feel that the doctor spoke to you and our partner together as a couple? _____%

4) How much of information given during the consultation do you think was relevant to just you? _____%

5) How much of information given during the consultation do you think was relevant to just your partner? _____%

6) How much of information given during the consultation do you think was relevant to both you and your partner as a couple? _____%

7) How many of the questions asked during the consultation do you think were addressed to just you? _____%

8) How many of the questions asked during the consultation do you think were addressed to just your partner ? _____%

9) How many of the questions asked during the consultation do you think were addressed to both you and your partner as a couple? _____%

10) How much do you feel that you spoke during the consultation? _____%

11) How much do you feel that your partner spoke during the consultation? _____%

12) How much do you feel that both you and your partner spoke together as a couple during the consultation? _____%

13) How happy were you with the actual consultation? _____%

14) How happy do you think your partner was with the actual consultation? _____%

15) How happy do you think both you and your partner were as a couple with the actual consultation? _____%

16) How happy were you with the outcome of the consultation? _____%

17) How happy do you think your partner was with the outcome of the consultation? _____%

18) How happy do you think both you and your partner were as a couple with the outcome of the consultation? _____%

19) How much of the consultation was related to improving your understanding? _____%

20) How much of the consultation was related to improving the understanding of your partner? _____%

21) How much of the consultation was related to improving the understanding of both you and your partner as a couple? _____%

22) How much of the consultation was related to addressing your concerns and emotional needs? _____%

23) How much of the consultation was related to addressing the concerns and emotional needs of your partner? _____%

24) How much of the consultation was related to addressing the concerns and emotional needs of both you and your partner as a couple? _____%

25) How much of the decision making with the doctor were you involved with? _____%

26) How much of the decision making with the doctor was your partner involved with? _____%

27) How much of the decision making with the doctor was both you and your partner, as a couple, involved with? _____%

Appendix K: Participant consent form, information sheet and demographics form.

Consent form

Title: Sub-fertile couple's expectations and perceptions of medical consultation.

Name of Researcher: Amie Roberts (Trainee Clinical Psychologist)

Please read the following statements and initial the boxes on the right hand side of each statement to confirm that you have read and understood it. Finally please sign the form in the space provided at the bottom of the form to confirm you consent to participating in the study. Thank You.

1.) I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2.) I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐

3.) I agree to take part in the above study. ☐

_____	_____	_____
Name of Patient	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature

Patient information sheet

Title: Sub-fertile couple's expectations and perceptions of medical consultation.

We would like to invite you to take part in a research study. Before you decide whether to take part it is important that you understand the purpose of the research and what it would involve for you. Please take your time to read the following information carefully before you decide whether to take part or not. Please feel free to ask if there is anything that is unclear or if you have any questions.

What is the purpose of the study?

The study is entitled "Sub-fertile couple's expectations and perceptions of medical consultation." The purpose of the study is to investigate the following questions:

- What are the expectations of members of sub-fertile couples of medical consultation
- Are there are any differences in the expectations of male and female members of sub-fertile couples
- Do sub-fertile couple members feel that there expectations were met following consultation
- What are the perceptions of male and female members of sub-fertile couples of medical consultation.

The study will also be used for educational purposes. The researcher is required to submit a research project as part of their Doctoral degree in Clinical Psychology.

Why have I been invited to take part?

You have been asked whether you would agree to take part in the research, as you are a member of a heterosexual couple experiencing sub-fertility and attending the sub-fertility clinic for medical consultation. The study is looking to use data from around 80 couples attending the sub-fertility clinic.

Do I have to take part in the study?

Participation in the study is voluntary. It is up to you to decide whether you would like to take part or not. We will describe the study and go through this information sheet which we will then give to you. We will then ask you to sign a consent form to show

you have agreed to take part. You are free to withdraw at anytime, without giving a reason. This withdrawal would not affect the standard of care that you receive.

What will I have to do if I do decide to take part?

The study will take place during your current visit to the sub-fertility clinic for medical consultation, only. No follow-up research sessions will be required. During your current visit you will be asked to complete three questionnaires, one before you enter the medical consultation with the Doctor and two immediately after the consultation. You will be asked to complete these questionnaires alone without discussing your answers with your partner.

What are the potential risks of taking part in the study?

It is possible that some individuals taking part in the study may feel distressed as a result of considering their experiences of sub-fertility and medical consultation. Anyone who becomes distressed during or immediately following the study will have the opportunity to talk to the researcher about how they are feeling. Individuals who are still experiencing distress following this will be offered the opportunity of counselling. The referral will be made by the researcher.

What are the potential benefits to taking part in the study?

We cannot promise that taking part in the study will help you but the information received from this study may help to improve the care of couple members experiencing sub-fertility during medical consultation in the future.

What will happen if I don't want to carry on with the study?

Should you change your mind about taking part in the study you are free to withdraw at any point. If you withdraw from the study all personal data collected from you will be destroyed. If you decide to withdraw from the study you should contact the researcher using their contact details listed below. The research is being undertaken outside of your medical care, therefore if you decide to withdraw from the study this will have no effect upon the medical care or attention that you receive.

Will my information be kept confidential?

All information gathered during your participation in the study will remain confidential. Confidentiality will be ensured through

- the secure storage of data on a password protected computer,
- the use of codes for participants, so that no names will be used within the study
- through restricted access to the data by only those persons directly involved with the study, such as the researcher and their academic and field supervisors.

The data collected during this study will not be used within future studies and will be disposed of securely once the study has been written up at the end of July 2010.

What will happen to the results of the study?

The results of the study are intended to be published within an academic journal. No information that could identify participants would be used within the publication.

Who has reviewed the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee. This is done to protect your safety, rights, wellbeing and dignity as a research participant. This study has been reviewed and given favourable opinion by the Hull & East Yorkshire Research Ethics Committee.

Further information and researcher contact details.

If you have a concern about any aspect of the study or any further questions, you should ask to speak to the researcher who will do their best to answer your queries. You can also contact the researcher on a.roberts@2004.hull.ac.uk or (01482) 464117. If you continue to remain unhappy and wish to make a formal complaint, you can do this through the NHS Complaints Procedure. Details of this procedure can be obtained from the hospital.

Thank you for your time

Participant number:.....

Thank you for agreeing to participate in the study. Before beginning with the main questionnaires of the study we would like to ask you to provide some general background details about yourself and some details more specific to your visit to the clinic.

Background details

Age:

Sex (Please circle): Male/ Female

Highest educational level (Please circle):	GCSE's (O-Levels)
	A-Levels
	Undergraduate degree
	Post Graduate degree
Ethnicity (Please circle):	White - British
	White – Any other background
	White and Black Caribbean
	White and Black African
	Any other mixed background
	Indian
	Pakistani
	Caribbean
	African
	Chinese
	Any other ethnic group

Marital status (Please circle): Married/ co-habitating

How long have you and your partner been together? ..... years ..... months

Have you ever been pregnant/ Do you have any children from this or a previous relationship? (Please circle) Yes/ No

If yes, how many times have you been pregnant/ how many children do you have?

How long have you been trying to conceive? ..... years ..... months

Details about your visit to the clinic.

Is this your first visit to the clinic? (Please circle) Yes/ No

If no, how many visits have you had to this clinic?

Do you have any diagnoses regarding your fertility status? (Please circle) Yes/ No

If yes, what is the diagnosis you have received?

What is the purpose of your visit to the clinic today?

Appendix L: Ethical Approvals