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Abstract

Background: Pelvic girdle pain is a prevalent condition during pregnancy. The associated pain can be constant and extremely distressing for women; however, the pathogenesis is still unclear. It is important to gain insight into women's experiences of pelvic girdle pain in order to improve these with a view to impacting positively on their physical symptoms, while also improving overall wellbeing and mental health throughout pregnancy and the puerperium.

Aims and Objectives: To use published literature to gain an insight into how pelvic girdle pain can impact on a woman's experience of pregnancy and the puerperium, to provide meaningful, evidence-based, recommendations for midwifery practice.

Method: A systematic literature review of qualitative research was undertaken. Database searches using Cumulative Index to Nursing and Allied Health, British Nursing Index, PsycINFO, and PubMed identified seven studies published between 2005 and 2014 in Sweden and England. Each paper was quality appraised in order to inform assessment of the credibility of findings. Following Noblit and Hare's (1988) seven-step process for meta-ethnography, findings from each paper were synthesised into key themes which were then developed into a new conceptual model.

Results: A conceptual model, consisting of five key themes, was identified. The central theme is 'loss of identity and control', the themes leading on from this are: 'adapting to pain', 'inadequacy and independence', 'expectations and perceptions of others', and 'psychological strain'. The model highlights the link between mental wellbeing and perceived intensity of pain.

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Conclusions: Pelvic girdle pain has a debilitating impact on the lives of pregnant women and further research is necessary to identify effective treatment methods.

Introduction

Pelvic girdle pain (PGP) is defined as:

"The pelvic girdle is a ring of bones around your body at the base of your spine. PGP is pain in the front and/or the back of your pelvis that can also affect other areas such as the hips or thighs. It can affect the sacroiliac joints at the back and/or the symphysis pubis joint at the front"

(RCOG, 2015:1)

PGP can occur due to a combination of factors, including the pelvic girdle joints moving asymmetrically and abnormal pelvic girdle biomechanics from altered activity in the spinal, abdominal, pelvic girdle, hip and/or pelvic floor muscles. There is often no known aetiology (Pelvic Obstetric & Gynaecological Physiotherapy (POGP), 2015).

PGP is a prevalent condition among pregnant women, associated with functional disability (Bjelland et al, 2010). General lumbo-pelvic pain affects 50 – 70% of women, with up to 45% suffering from PGP specifically (Bjelland et al, 2010; POGP, 2015). Some studies suggest the prevalence in late pregnancy may even be above 50% (Gutke et al, 2006; Mogren, 2006; Robinson et al, 2010). POGP (2015) reveal that 14 – 22% of women will have serious PGP, with 5 – 8% suffering with severe pain and disability.

Risk factors for PGP include multiparity, previous lower back pain, emotional distress, BMI $\geq 25\text{kg/m}^2$, low educational level and physically demanding work, higher level of stress and job dissatisfaction (Albert et al, 2006; Bjelland et al, 2010). Ceprjna et al (2017) and Malmqvist et al (2012) report a possible genetic link for PGP, but their studies do not distinguish between PGP and low back pain.

It is known that chronic pain, from whatever source, is not only a highly unpleasant experience for the individual but can also have detrimental effects on many other aspects of life, including mood and capacity to function in daily roles (Persson et al, 2013).

Symptoms of PGP include pain in the pubic region, hips, groin, thighs or knees; pain exacerbated by movement and clicking or grinding in the pelvic area. Prompt diagnosis is essential to increase the chance of improving symptoms or prevent any worsening (RCOG, 2015). PGP is generally managed and/or treated using exercise and physiotherapy. A Cochrane review found no conclusive evidence of an effective treatment for PGP, although one study showed craniosacral therapy made significant improvements to functional disability, compared with usual antenatal care, although only for morning pelvic pain (Liddle and Pennick, 2015).

This systematic literature review is concerned with exploring the subjective experiences of women who have suffered with PGP in order to understand how their symptoms impact on their pregnancy and the puerperium. This will enable possible improvements in care to be identified which may help improve women's experiences and address some of the psychosocial effects of the condition.

Methods

The Centre for Reviews and Dissemination (CRD) (2009) discussed the importance of systematic literature reviews in the context of providing good quality, evidence-based information.

A systematic approach was employed to search for qualitative literature exploring the phenomenon of PGP from the viewpoint of women with the condition. Although qualitative

studies cannot be used to assess effectiveness, they are central to understanding experiences. The synthesis of the findings from the retrieved studies was guided by Noblit and Hare’s seven step process for meta-ethnography, an interpretive approach which allows for the creation of a new and deeper understanding of a topic (Noblit and Hare, 1988). Rigorous synthesis can draw out the importance and relevance of qualitative findings, helping to ensure their contribution towards informing guidelines, service design and care (France et al, 2015).

Search strategy

A search strategy was developed to answer the research question: “How does PGP impact on a woman’s experience of her pregnancy and the puerperium?” The following inclusion and exclusion criteria were applied (Table 1).

Table 1 Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Research conducted from 2005 to present	Research conducted pre 2005
Women of any parity or risk status, with a specific diagnosis of PGP, either in isolation or alongside general lumbo-pelvic pain	Women without a specific diagnosis of PGP
Research specifically including women’s experiences in the antenatal or postnatal period	Research that does not include women’s experiences in the antenatal or postnatal period
Research looking at the experience of	

primiparous women, multiparous women, or a mix	
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Author 1 applied the inclusion/exclusion criteria to the papers identified and consulted Author 2 who agreed with the final selection. Blind review was not thought to be necessary as the selection criteria were objective.

The databases searched were: Cumulative Index to Nursing and Allied Health (CINAHL), British Nursing Index (BNI), PsycINFO, and PubMed. The Population, Exposure, Outcome (PEO) model was used to develop search terms from the research question (Glasper and Rees, 2013). The population was childbearing women, the exposure was PGP and the outcome women's experiences of the condition. MeSH headings were then identified and synonyms systematically considered. The final search strings can be seen in Figure 1.

Figure 1 Search Strings

SEARCH TERM ONE (Population): pregnan* OR child?bearing OR ante?natal OR pre?natal OR post?natal OR peri?natal OR puerperium OR gestation
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AND

SEARCH TERM TWO (Exposure): pelvic girdle pain OR PGP OR symphysis pubis dysfunction OR SPD OR pelvic pain OR pelvic instability

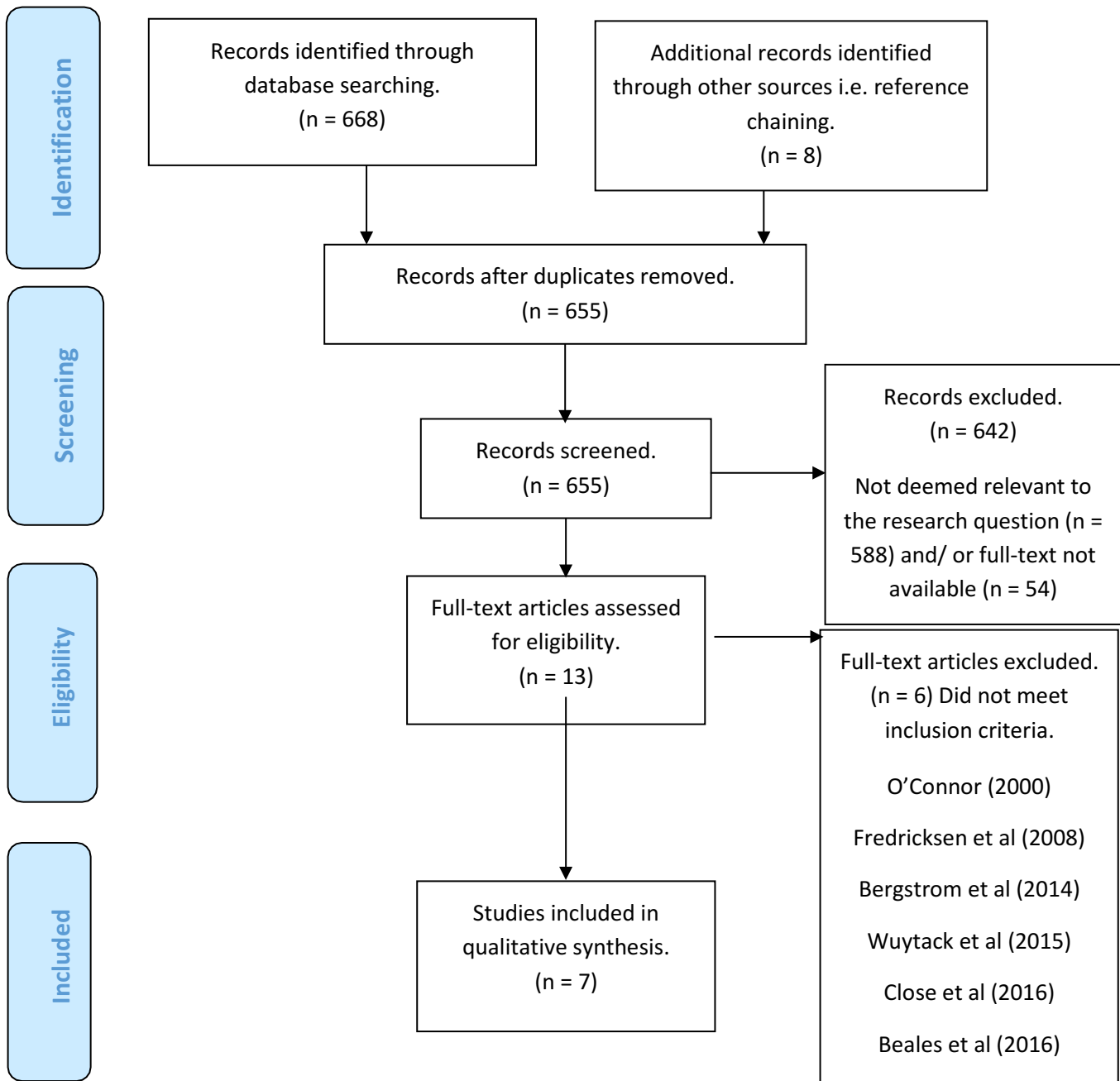
AND

SEARCH TERM THREE (Outcome): experience* OR feeling* OR attitude* OR belief* OR psychological impact* OR psychological effect* OR emotion* OR perspective* OR opinion* OR
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The PRISMA flowchart (Liberati et al, 2009) (Figure 2) gives an overview of the search process.

Figure 2 PRISMA Flowchart



Key authors for this subject were identified and contacted as an attempt to widen the search and identify any grey literature. No further papers were identified through this method.

Critical appraisal is *“the process of systematically examining research evidence to assess its validity, results and relevance before using it to inform a decision”* (Hannes, 2011:3). Although the use of critical appraisal in qualitative syntheses is contested (Majid and Vanstone, 2018), it was felt that the use of appraisal tools to make an informed and relatively objective assessment of quality would enable judgements of the credibility of findings from different studies to be made. Each paper in the final sample was therefore analysed using the Critical Appraisal Skills Programme (CASP) (2013) tool for qualitative research, and then graded according to the quality checklist outlined by Kmet et al (2004). While the CASP tool is the most widely used and provides an ideal framework for the discussion of process (Newton et al 2012), the scoring system developed by Kmet et al (2004) allows papers to be assigned a quality ranking. Quality rating scores were calculated by answering a set of questions for each paper, listed in Table 2; $\text{sum} = (\text{number of “yes”} * 2) + (\text{number of “partials”} * 1)$ Total possible sum = 20 (See Table 2 below). Both tools are, however, subjective checklists which could introduce unintentional bias. Furthermore, the evaluation can only be undertaken on the basis of information in the published work, which may not always reflect the quality (Newton et al, 2012).

Table 2 Quality Rating Questions (Kmet et al, 2004)

Question/ objective sufficiently described?

Study design evident and appropriate?

Context for the study clear?

Connection to a theoretical framework/ wider body of knowledge?

Sampling strategy described, relevant and justified?

Data collection methods clearly described and systematic?

Data analysis clearly described and systematic?

Use of verification procedure(s) to establish credibility?

Conclusions supported by the results?

Reflexivity of the account?

Results

Seven studies were included in the review. The studies were published between 2005 and 2014, and conducted in Sweden and England. A summary of the studies is provided in Table 3, and Table 4 lists the main strengths and limitations arising from the critical analysis.

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Table 3 Summary of the Studies

Study	Aims	Sample	Methods of Data Collection	Methodological approach
<p>Shepherd (2005) England</p>	<p>To describe symphysis pubis dysfunction (SPD) from a woman's perspective of living with the condition.</p>	<p>Purposive sampling. n = 9 women</p>	<p>Semi-structured interviews. Interviews conducted in participants' homes. Participants interviewed twice; 1 and 3 months postnatally. Length of interviews is not given. Interviews audiotaped.</p>	<p>Colaizzi's (1978) Phenomenological framework. Thematic analysis.</p>

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<p>Crichton and Wellcock (2008)</p> <p>Wellcock and Crichton (2008)</p> <p>England</p>	<p>To explore the disabling effects of SPD on the lives of pregnant and newly-delivered women and their families.</p>	<p>Purposive sampling.</p> <p>n = 28 women</p>	<p>Semi-structured interviews.</p> <p>Women interviewed in a place of their choosing; usually their own home.</p> <p>Interviews proposed to take place at three designated points. Three women were interviewed on three occasions; 17 were interviewed twice; and eight, once. Gestation not provided.</p> <p>Interviews lasted 30 - 90 minutes.</p> <p>Interviews audio-taped.</p>	<p>Colaizzi's (1978) phenomenological framework.</p> <p>Themes and sub-themes were identified, explored and fully discussed.</p> <p>Women were consulted about the final themes to provide confirmation.</p>
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<p>Persson et al (2013) Sweden</p>	<p>To investigate the experiences of women living with PGP in pregnancy.</p>	<p>Purposive sampling. n = 9 pregnant women.</p>	<p>Semi-structured interviews. Interviews conducted in a place chosen by the informant; usually the woman's home. Participants interviewed once; Interviews conducted in last trimester of pregnancy. Interviews lasted 30 – 90 minutes. Interviews audio-taped.</p>	<p>Followed the grounded theory design.</p>
<p>Elden et al (2013) Elden et al (2014) Sweden</p>	<p>To describe pregnant women's experiences of PGP as related to daily life.</p>	<p>Purposive sampling. n = 27 women</p>	<p>Semi-structured interviews. Participants interviewed once, gestation at time of interview not provided. Interviews lasted approximately 1 hour. Interviews audiotaped.</p>	<p>Qualitative content analysis.</p>

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Engeset et al Norway (2014)	To explore how PGP after delivery influences women's daily life.	Purposive sampling. n = 5 women	Semi-structured interviews. Women interviewed in connection with planned treatment. All women interviewed once, gestation at time of interview is not provided. Interviews lasted 40 – 60 minutes. Interviews audiotaped.	Phenomenological-hermeneutical approach. Data imported into NVivo 9 and analysed according to Lindseth and Norberg's (2004) 3 steps.

Table 4 Main Strengths and Limitations of Studies

	Strengths	Limitations
<p>Shepherd (2005) QR: 14/20</p>	<p>In depth description of the data analysis process, which appeared sufficiently rigorous.</p> <p>Anonymous transcript and data were returned to a participant and a physiotherapist who has studied PGP to confirm trustworthiness of interpretation. This increased reliability.</p>	<p>Lack of description of the information provided to participants. All 9 women approached agreed to participate after being provided with an information sheet. The researcher contacted them to obtain consent. Could be seen as persuasive.</p> <p>Credibility of findings were not discussed at any stage, with no documented consideration of the relationship between the researcher and participants. Increases the risk of potential bias.</p>
<p>Crichton and Wellcock (2008) Wellcock</p>	<p>Provides excellent recommendations for practice and suggestions for future research are made.</p> <p>Discussion surrounding findings is detailed and relates to existing knowledge and current practice.</p>	<p>Critical examination of the author’s role is not provided, increasing the risk of potential bias.</p>

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<p>and Crichton (2008) QR: 15/20</p>		
<p>Persson et al (2013) QR: 18/20</p>	<p>Data collection was well justified. Data saturation was discussed and achieved.</p> <p>The relationship between the researchers and participants was considered at length, increasing the reliability.</p> <p>Authors considered their own vast experiences of caring for women with PGP and reflected on how this could affect their analysis of findings. To counteract this, the two co-authors without this experience were involved. This helped to make it possible to explore and discuss data in a balanced manner.</p>	<p>No clear implications for practice are provided.</p> <p>Lack of information regarding ethical considerations.</p>
<p>Elden et al (2013) Elden et al</p>	<p>Follow-up support was offered to participants, this was an important ethical consideration.</p> <p>The studies strengths and limitations were discussed by authors,</p>	<p>The relationship between the researcher and participants has not been critically examined at any stage.</p>

Data analysis

Data analysis was guided by the seven-step process for meta-ethnography proposed by Noblit and Hare (1988). The first two steps were completed at the literature search stage; refining the research question and screening all literature found. Retrieved studies were then read repeatedly to derive concepts and themes that arose in each paper, using the initial themes identified by the authors of each paper. Next, common themes and concepts were identified and an initial assumption about how the studies are related was made. Key metaphors, phrases, ideas and concepts were collated, then colour coded and organised into relating categories. From this, new themes (or 'first level translations') were identified and synthesised into a conceptual model.

Findings

Five themes were identified: Loss of identity and control, dependence and inadequacy, expectations and perceptions of others, adapting to pain, and reframing the future and psychological strain. Table 5 illustrates the papers in which each theme appears; the papers are listed from left to right in the order of their quality rating (Kmet et al, 2004). Different shades of blue have been used to demonstrate the scale of themes within each paper, darker colours represent the theme being more dominant. This is an important step to distinguish the strength and quality of each theme. To clarify this further, the table is also ordered from top to bottom according to the prominence of each theme across all seven studies.

Table 5 Themes



	Elden et al (2013) Elden et al (2014)	Shepherd (2005)	Crichton and Wellcock (2008) Wellcock and Crichton (2008)	Engeset et al (2014)	Persson et al (2013)
Quality rating	12/20	14/20	15/20	16/20	18/20
Loss of Identity and Control	Dark Blue	Light Blue	Dark Blue	Light Blue	Dark Blue
Dependence and Inadequacy	Blue	Blue	Dark Blue	Light Blue	Blue
Expectations and Perceptions of Others	Blue	Light Blue	White	Light Blue	Dark Blue
Adapting to Pain	Light Blue	Light Blue	Blue	Light Blue	Light Blue
Reframing the Future and Psychological Strain	Light Blue	Light Blue	Blue	Light Blue	Light Blue

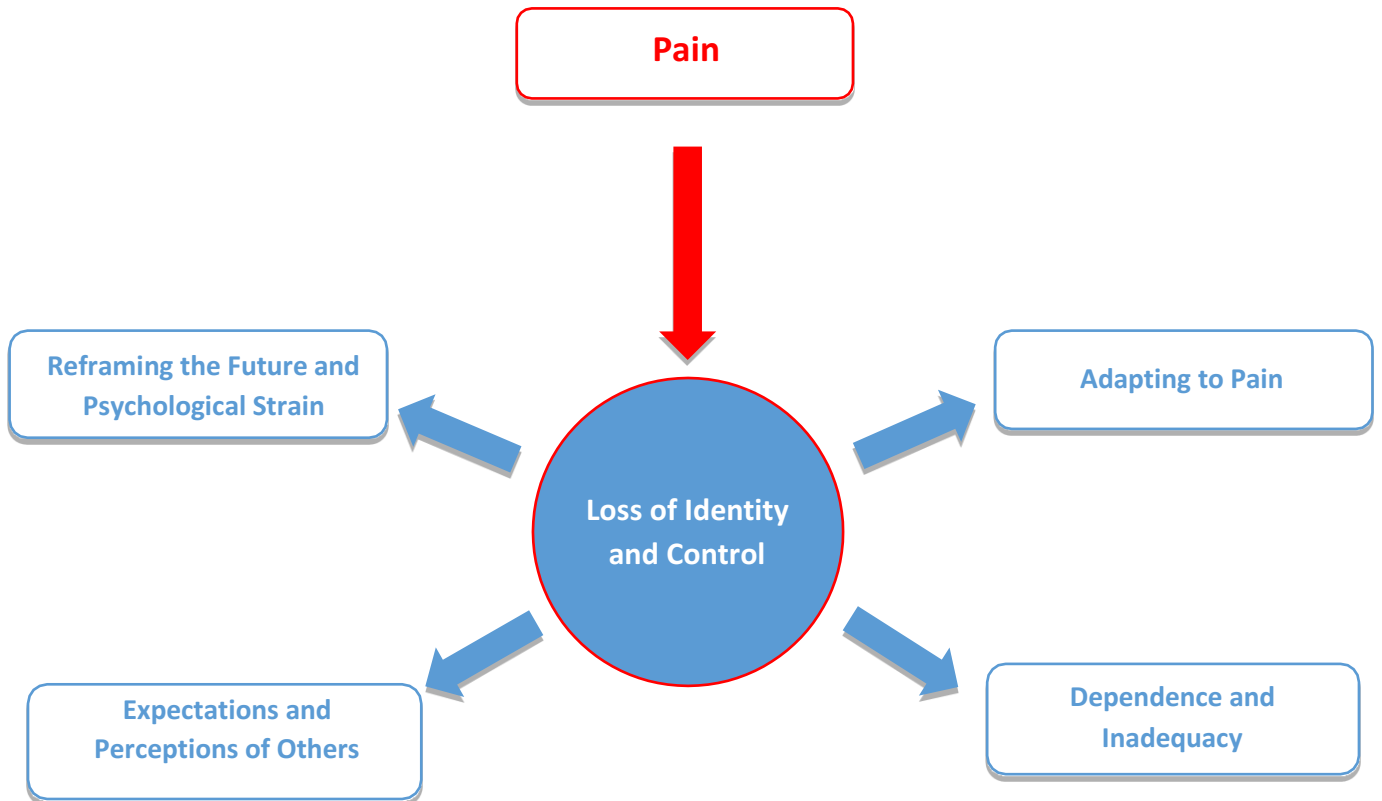


The themes were developed into a conceptual model (Figure 3). The model portrays loss of identity and control as a central concept, encapsulated by the remark 'You are nobody when you are sick'. Pain is a key contributor to this sense of loss, which leads to a reframing of self and relationships, and necessitates a process of adaptation and reappraisal of the future. Each theme is discussed in more detail below.

"You are nobody when you are sick."

(Persson et al, 2013:5)

Figure 3 Final Concept



Theme One: Loss of Identity and Control

Diminished control linked to the loss of identity was prevalent. This was apparent in four studies (Crichton and Wellcock, 2008; Persson et al, 2013; Elden et al, 2013/2014).

"I seem to have lost control over my life..."

(Crichton and Wellcock, 2008:13)

Overall, this theme seemed to be the central point from which other emotions stemmed.

Loss of control could be recognised as beginning at the first signs of PGP. Persson et al (2013) noted that most informants experiencing PGP for the first time were unprepared and had trouble understanding what PGP was. Elden et al (2014) also found that women were disappointed by the lack of education about the existence of PGP, emphasising that the first time they experienced PGP they worried something was seriously wrong.

"You feel you're on your own. Why hasn't anyone told me when it's so common? You almost feel cheated. You want to cry out – tell me about it! At least you will then be a little bit more prepared."

(Elden et al, 2014:34)

Women referred to their bodies as a separate entity, over which they had lost control:

"Stupid body, why are you treating me like this"

(Elden et al, 2014:34)

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This loss of control resulted in a loss of identity in at least one aspect of their lives, as a mother, daughter, wife/partner, or professionally, as women struggled to carry on: *"This can feel very isolating. You feel different. You blame yourself for not being able to cope...and you say – put some effort into it. Some days you are able to force yourself to get up and get going, other days you just can't"*

(Elden et al, 2013:30)

The loss of identity experienced by women in relation to their mothering role was revealed in all papers. Women expressed a sense of guilt and frustration, particularly when children did not understand why their mothers could no longer provide the same level of care. Women felt sad that they were unable to fulfil their child's need for closeness and attention due to PGP. Crichton and Wellcock (2008) and Elden et al (2013) picked up on women's perceptions that their dependence on others resulted in children needing to become more independent when there was no-one else available to help:

"Unless you've got the support of others... it means there's you all day with a baby that you feel you can't look after adequately..."

(Crichton and Wellcock, 2008:13)

They felt this affected bonding considerably, and felt frustration and anger towards their unborn baby.

"I haven't really been able to enjoy my little boy... I feel cheated"

(Shepherd, 2005:304)

Some women referred to the impact PGP had on the whole family. One participant was particularly distressed that the pain caused her to become irritable, resulting in her quickly losing her temper.

The effect on the participant's role as a wife/partner was picked up in six studies (Shepherd, 2005; Crichton and Wellcock, 2008; Wellcock and Crichton, 2008; Elden et al, 2013; Persson et al, 2013; Engeset et al, 2014). PGP caused women to become more sensitive and they struggled with changed roles; partners had to do more things at home, and this made women feel uneasy.

"It must feel strange to him that I can't do certain things. I'm not sure he wants to know about it. He has a hard time realizing I don't really mean it. He's a bit snappy himself. I said you just have to think a bit like me... To be in constant pain is hard work. You are not yourself all the time"

(Elden et al, 2013:31)

The impact on women's sexual relationships is discussed in four studies (Crichton and Wellcock, 2008; Wellcock and Crichton, 2008; Elden et al, 2013; Persson et al, 2013). The pain physically inhibited sexual activity, however women still sought intimacy in other ways. This was further exacerbated by having to sleep in separate beds to their partner due to the space needed to turn over in bed during the night,

The loss of professional identity specifically, was referred to in three papers (Crichton and Wellcock, 2008; Elden et al, 2013; Persson et al, 2013). Loss of professional identity often caused great psychological strain, affecting self-worth. Many women initially felt defeated

for having to take sick leave; however, when they acknowledged they had to accept their limitations they found they could cope better once they had done this (Elden et al, 2013).

Theme Two: Adapting to Pain

The pain from PGP was the source of most problems encountered by women; it is described in detail across all studies. The pain was experienced as exhausting and constant.

“My whole pelvis feels raw, I wish it were possible to apply a lubricant to the inside of my pelvis and bottom of my spine so that it wouldn't grind...”

(Wellcock and Crichton, 2008:7)

Women had to make adaptations in all aspects of their lives to cope with the pain, including altering the way they walked, planning movements and activities in advance, and assessing every situation based on how much pain it was worth (Crichton and Wellcock, 2008; Wellcock and Crichton, 2008; Persson et al, 2013; Elden et al, 2013/2014).

Sleep deprivation was mentioned in six studies (Shepherd, 2005; Crichton and Wellcock, 2008; Wellcock and Crichton, 2008; Persson et al, 2013; Elden et al, 2013/2014). Women had to adapt how and where they slept. Some began using slippery sheets in bed to assist them when they needed to turn over. Others had to wake their partners whenever they needed to move, further exacerbating relationship difficulties. PGP required women to rest and obtain more sleep; however, they were unable to get this due to the pain, causing further exhaustion, exacerbating the physical pain and resulting in women feeling less able to cope emotionally.

“I was so tired because one thing is the pregnancy but also you have pain, because I had pain 24 hours... it takes so much of your energy. It really drains your system of resources.”

(Crichton and Wellcock, 2008:303)

Theme Three: Dependence and Inadequacy

Inadequacy and dependence, is apparent across all studies. PGP caused women to become extremely dependent on others in all aspects of their lives, including personal hygiene needs.

Dependence was both an emotional problem and a practical issue (Shepherd, 2005; Crichton and Wellcock, 2008; Elden et al, 2013; Persson et al, 2013). Women viewed themselves as a burden to their families, which caused significant emotional stress.

"It's devastating to be a married 27 year old with a family of my own and be dependent of my parents to make my daily life function. It really gnaws my self-esteem."

(Persson et al, 2013:6)

The ability to continue with housework as before was affected. Interestingly, women perceived this issue in different ways, some emphasised feelings of inadequacy and frustration, whereas others found it to be a good thing, and focussed on the appreciation of help from others.

"I just couldn't do it (housework). From about 30 weeks it got to the point where I couldn't be on my feet for long, I literally would do about half an hour and then I would have to stop, I was utterly exhausted. "

(Shepherd, 2005:305)

Embarrassment was felt for several reasons, including the severity of their dependence on others. Crichton and Wellcock (2008) noted that some women were often unable to reach the toilet in time.

“Sometimes in the bedroom, I have to roll on to the floor... and you get up to go to the bathroom and it's very difficult... one time I had to crawl to the bathroom...’ (VM18). (This woman reported that she wet herself before she reached the bathroom and became very upset).”

(Crichton and Wellcock, 2008:12)

Theme Four: Expectations and Perceptions of Others

Expectations and perceptions of others, is apparent in five studies (Shepherd 2005; Persson et al, 2013; Elden et al, 2013/2014; Engeset et al, 2014). The theme is most prominent in the highest quality paper by Persson et al (2013).

The constant pain that women experienced was perceived as invisible to others, particularly among women's colleagues, friends, family and with the public, causing further anxiety and frustration. Strangers would question what was wrong, saying pregnancy was natural and nothing to complain about. One woman told how she had been teased for the way she was walking, when she was in excruciating pain and could barely move. When friends did not understand, or continuously questioned their aches and pains, women felt it was important to distance themselves from this negativity, acknowledging the impact this had on their emotional wellbeing.

Engeset et al (2014) found that women sought positive input from others, which boosted their wellbeing and self-esteem:

"My closest friends know what I need... they try to give me a comfortable seat on the sofa or such things. It's very nice; that makes me happy"

(Engeset et al, 2014:4)

Two studies reported women's experiences of health professionals (Shepherd, 2005; Engeset et al, 2014). There appeared to be a disparity in the care and advice provided which impacted greatly on women's experiences. Women emphasised the difference it made when their midwife understood the amount of pain PGP can cause. Although women valued extra support and information provided by HCPs, the real value was placed on the acknowledgment and understanding that they had a significant problem. When these needs were not met, women were left feeling dismissed which was detrimental to their emotional wellbeing.

"They should have understood that something might be wrong; for instance, they may have suggested that I could have talked to the physiotherapist before discharge... Just simple actions like that... showing that they understand that I actually had a problem."

(Engeset et al, 2014:4)

Theme Five: Reframing the Future and Psychological Strain

In three papers (Crichton and Wellcock, 2008; Wellcock and Crichton, 2008; Persson et al, 2013) informants revealed that PGP had caused them to regret their planned and eagerly anticipated pregnancy. They struggled with negative thoughts and emotions which caused considerable psychological strain.

"I thought I don't want this baby... and I was frightened of looking at him and saying and thinking... I don't love you, you have caused me all this pain..."

(Crichton and Wellcock, 2008:14)

Women across six studies emphasised how PGP caused them to reconsider the future (Shepherd, 2005; Crichton and Wellcock, 2008; Wellcock and Crichton, 2008; Persson et al, 2013; Elden et al, 2013/2014). Previously they planned to have more children, however many women were now adamant that they would not go through this again.

“As I feel right now, never more I will torture my body like this”

(Persson et al, 2013:6)

Women were extremely fearful of having a vaginal birth, as they could not bear the thought of any more pain, therefore opting to have elective caesarean sections:

“Psychologically I just had this sort of – how on earth can I have a vaginal birth through all that pain already and the thought of spreading my legs and having a baby come out that way, was just horrendous”

(Shepherd, 2005:303)

For the same reason, women in one medium quality study reconsidered how they were going to feed their baby:

“All I could think about was breastfeeding can be a problem, you can get very sore ... I really, really cannot bear the thought of more pain”

(Shepherd, 2005:303)

Depression is explicitly mentioned in three studies (Shepherd, 2005; Crichton and Wellcock, 2008; Elden et al, 2014), however statements made by women in all studies suggest an

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element of low mood. One participant confided in a researcher that she had been having suicidal thoughts (Crichton and Wellcock, 2008).

"The pain caused the prenatal depression and postnatal depression this time ... I certainly think it's been worse with the amount of pain I've been in"

(Shepherd, 2005:304)

Discussion

The conceptual model developed in this review provides a deeper understanding of the affect PGP can have on a woman's experience of pregnancy and the puerperium, highlighting that the consequences of PGP stem from a loss of identity and control which is caused by pain. Identifying the importance of identity and control may enable better support and treatment to be provided to women with PGP.

Our findings resonate with research in related fields, increasing their credibility. Qualitative studies exploring the experiences of men (Bailly et al 2015) and men and women (Bunzli et al 2013) with lower back pain, for example, report a perceived lack of understanding and support due to the 'invisible' nature of the condition, coupled with a loss of identity at home and work (Bailly et al 2015). Loss of identity is attributed partly to pain, which altered people's characters, making them irritable with destructive mood changes. This is also seen in women with PGP, who expressed how they lost their temper more quickly. Participants in both studies describe the negative effects of increased dependency on family and relationship dynamics. As with women with PGP, men with lower back pain appeared to benefit greatly from positive reinforcement and support from others that showed understanding (Bailly et al, 2015).

Similarly, a need for information about their condition is identified in a study investigating the experiences of women living with fibromyalgia (Daraz et al 2011). Women discussed the need for support and information to overcome uncertainty and suffering, and to regain a sense of control. This resonates with how women with PGP described the need for recognition and diagnosis, whilst also acknowledging feeling a loss of control, suggesting that support and information may help women to feel more in control in relation to PGP.

Women with fibromyalgia expressed it was helpful to become acquainted with other sufferers, as this provided a sense of hope and a feeling that they were not alone in their suffering (Daraz et al, 2011). This connectivity may also be beneficial to women with PGP, who also spoke of isolation and a lack of support from health professionals.

Overall these studies demonstrate that ongoing and continuous pain, no matter the source, can result in similar psychosocial consequences. Katz (2002) emphasises that when pain is ongoing and uncontrolled, it has a detrimental effect on virtually every aspect of a person's life. Pain causes anxiety and emotional distress, undermines wellbeing, interferes with functional capacity and hinders the ability to maintain and fulfil family, social and occupational roles (Katz, 2002). This is reflected enormously in the current findings. Emotional distress, in turn, may increase awareness of pain symptoms (Edwards et al, 2011; Bjelland et al, 2012).

Symptoms of depression were alluded to in some of the studies in this review (Shepherd, 2005; Crichton and Wellcock, 2008; Elden et al, 2013; Persson et al, 2013; Engeset et al, 2014). Bjelland et al (2012) reported that, for women with PGP, the presence of emotional distress during pregnancy is independently associated with the persistence of PGP after delivery. This is an important finding as it clearly demonstrates association between a person's mental health and physical wellbeing, in the particular context of PGP. The implication of these findings is that if emotional distress could be addressed during pregnancy then this may be able to prevent the persistence of PGP after delivery (Bjelland et al, 2012). Furthermore, a cohort study by Gutke et al (2011) found that postpartum depressive symptoms were three times more prevalent in women having lower back pain

than those without. This further emphasises the need to consider psychological as well as physical aspects when identifying treatment strategies (Gutke et al, 2011).

Edwards et al (2011) discussed the process of depression and catastrophizing, and the influence on pain-related outcomes. Catastrophizing refers to a set of pain-related emotional processes, which involve feelings of helplessness, a tendency to ruminate about pain, and a susceptibility to magnifying the value of pain (Edwards et al, 2011). These factors then influence a broad spectrum of pain-related outcomes via a variety of pathways: behavioural, cognitive and physiological.

Catastrophizing is apparent in the current study; for example, some women declared they would not have another child because of the pain caused by PGP, whilst others felt unable to be a good mother to their children (Shepherd, 2005; Crichton and Wellcock, 2008; Elden et al, 2013; Persson et al, 2013; Engeset et al, 2014). However, Engeset et al (2014) found some women adopted a positive outlook, for example congratulating themselves on small achievements and coping strategies formed, such as ways to unload the dishwasher to minimise time bending down. This could suggest that when a positive and practical attitude is adopted, women's pain perception is affected positively. Interestingly, these women also expressed that they would not rule out becoming pregnant again. Furthermore, we posit that the link between pain and thought processes is less likely to be a linear process, as suggested in Edwards et al's catastrophizing model (2011), than a feedback loop, whereby pain can intensify due to depression or catastrophizing, which then further exacerbates this mental state, causing a worsening of the pain. Our findings suggest that pain could similarly be lessened by focusing on addressing negative mental states, and that HCPs should

monitor the psychological wellbeing of women with PGP regularly and routinely, particularly noting any symptoms of depression.

Our findings highlight that women experiencing PGP are not always treated with respect and sensitivity by health professionals, further exacerbating their pain and discomfort. Value was placed on being taken seriously, with HCPs recognising women's concerns and acting appropriately (Shepherd, 2005). In particular, women expressed anxiety and fear around giving birth with PGP, suggesting a need for informed and sensitive discussion and planning with their midwife and the multi-professional team. Similarly, women were reluctant to breastfeed due to fear of further pain, emphasising the importance of breast feeding support for all women.

National guidelines created by POGP (2015) include management for both physical and psychological aspects of PGP, and consider emotional wellbeing, sexuality, dependence and planning for future pregnancies. Our findings suggest a lack of awareness of this advice, however. We suggest that a National Institute of Health and Care Excellence (NICE) guideline might be more widely implemented. Additional information that could be included is the need to provide early antenatal education about the signs and symptoms of PGP, with a view to reducing distress caused by women experiencing these symptoms without any prior knowledge of the condition. A more proactive approach to enquiring about PGP symptoms might enable earlier recognition and referral, in order to manage the condition and the associated pain more effectively. Continuity of Carer, as recommended by the National Maternity Review (2016), may enable women to feel more comfortable talking about issues such as the impact of PGP on their sexuality

In relation to our final theme of reconsidering the future, we recommend that routine counselling for future pregnancies should be offered to women who have suffered with PGP.

Strengths and limitations

A systematic approach was used when conducting this literature review. Key authors were contacted in order to ensure a comprehensive search. However, an exhaustive search of grey literature was not possible within the time and resource limitations of this review. Furthermore, data analysis was conducted by a single researcher (author 1), making the findings subject to potential bias. To mitigate this, a systematic, iterative approach coupled with reflection and discussion with author 2 was adopted.

Conclusion

By identifying the overarching issues of loss of identity and control, this review provides a deeper conceptual understanding of the experiences of women with PGP. While individual papers focussed on the impact on women's everyday lives, such as an inability to participate in routine activities, and an adverse effect on relationships, synthesising the findings using an interpretive approach identified a process that women go through when dealing with PGP. The link between mental wellbeing and pain intensity has been highlighted, along with the ensuing importance of holistic, woman-centred care including information giving, emotional support and birth planning.

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