



2023

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An Overlooked Problem: A Qualitative Meta-synthesis From Experience of Men with Diabetic Erectile Dysfunction

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Abstract

Background: ED is negatively associated with men's sexual function capacity, emotional, intimate relationship and particularly psychological well-being. The purpose of this study was to synthesize qualitative findings which explain the experiences of men with diabetes who have erectile dysfunction.

Methodology: A meta-synthesis was performed. A search for qualitative studies published in English from 2010 to 2020 was conducted using PubMed, CINAHL, PsycInfo, and Science Direct databases. The main key words included: experience, men/male patient, erectile dysfunction, diabetes, diabetic erectile dysfunction, and qualitative research. Inductive and interpretative technique was used to analyze and synthesize findings from qualitative studies and reviewed by another reviewer. Seven qualitative studies were included in this review.

Results: The experiences of living with erectile dysfunction among men with diabetes were presented in five themes: 1) Personal sexual values, 2) Lack of understanding of causes, 3) Breaking manhood and husband's role, 4) Recovering masculinity, and 5) Negative experiences and needs in care.

Conclusion: Men interpret erectile dysfunction as a threat to their masculinity and can have deleterious impact on their relationships and self-esteem. Health care providers should provide information on the connection between sexual problem and diabetes. Screening for erectile dysfunction and its risk factor should be routine in diabetes. Health care providers should ask men with diabetes about their sexual health and give them the opportunity to express their concern.

Keywords: Diabetes mellitus, Erectile dysfunction, Men, Meta-synthesis

1. Introduction

Diabetes mellitus is a chronic disease that has been associated strongly with sexual problems [1]. Patients with diabetes can develop sexual problems through diabetic-induced end organ damage and psychological stress [2]. Importantly, diabetes mellitus is one of the largest risk factors of erectile dysfunction (ED), particularly in men [3].

Erectile dysfunction (ED) is an under-recognized complication of diabetes that is experienced by millions of men with diabetes worldwide [3]. ED affects approximately 20%–85% of men with diabetes and has been revealed to negatively impact their quality of life [4,5]. One study indicated a

threefold possibility of having ED in men with diabetes compared to non-diabetic men [6]. Another recent report explained that men aged 50–59 years have a 3.6 times higher risk for developing ED compared to men aged 18–29 years. In addition, the greater risk can be found among men with diabetes over 60 years of age [7]. By the year 2025, it is anticipated that a total of 322 million men will suffer from sexual dysfunction worldwide [4].

ED is a consequential condition for men [8] that involves diminished sexual function capacity, psychological distress, and loss of intimacy in relationships, which may lead to a reduced quality of life among men and their partners [9]. Although the impacts of ED have been documented, it remains a

Received 4 May 2021; revised 23 July 2021; accepted 4 September 2021.
Available online 31 August 2022

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<https://doi.org/10.56808/2586-940X.1003>

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clinically neglected condition. The evidence reported indicates low rates of consultation, low rates of ongoing medical ED interventions, and low rates of adherence to therapy among men with diabetes who have ED [10,11]. To our knowledge, there are no previous studies that have clearly explained the factors behind these low rates. Instead, most previous studies have focused on the effectiveness of treatment. Thus, increasing understanding of men's perceptions and experiences regarding sexual function and erectile dysfunction appears critical for treating male patients with diabetic erectile dysfunction (DED).

Among men, gender and sexuality are difficult to separate [12]. The ability to maintain an erection and perform sexual activities has been described as the core of men's role [13]. ED can disrupt normal sexual function, such as being unable to achieve or maintain an erection and lack of desire for sex. These changes to men's sexuality can undermine their image of manhood. Among most men, coping with ED is difficult and quite challenging to overcome [9,12,13]. However, ED assessment is often overlooked. A recent study found that practicing nurses struggle to assess ED and provide care for men with diabetes [14]. This may be due to the fact that the experience and the consequences of ED on the sufferer are multifaceted and cannot be understood sufficiently from a single point of view.

It is thus remarkably important to understand and further inform the practices for supporting men with DED. Qualitative synthesis is now acknowledged as a valuable technique for investigating participants' meanings, perspectives, and experiences, both deeply and broadly [15]. Integrating and interpreting findings from multiple qualitative studies can greatly improve our understanding of the experiences of men with DED and their perspectives, which is particularly useful in addressing clinical omissions to improve care. This review aimed to synthesize the available qualitative studies that illuminate the experiences of men with DED for answering the question of how life with DED is lived and handled.

2. Methodology

2.1. Study design

This meta-synthesis approach was based on the guidelines developed by Sandelowski and Barroso [16]. This approach was chosen because it provides a comprehensive framework for qualitative research synthesis and it facilitates creative thinking and originality. It is a rigorous method for integrating

and interpreting the findings from several qualitative studies, and as a result, a new and integrative interpretation of the findings emerged [15]. Conducting this meta-synthesis involved defining the research question, defining the inclusion criteria and selecting studies, assessing the quality of the studies, extracting and presenting formal data, analyzing the data, and expressing the synthesis.

2.2. Search strategy

The identification of qualitative research papers for this review was carried out by two authors through a computer-aided search. The Preferred Reporting for Systematic Reviews and Meta-Analyses (PRISMA) [17] was performed. PubMed, CINAHL, PsycInfo, and Science Direct databases were searched for published paper. The terms used in the search strategy were: 'experience', 'men/male patient', 'erectile dysfunction/sexual dysfunction', 'diabetes', 'diabetic erectile dysfunction', and 'qualitative research'. The databases were searched separately to enhance the identification of relevant studies and were searched in the period of May 2020 to June 2020.

2.3. Eligibility criteria

Inclusion criteria in selecting papers for this review were articles which: (a) employed qualitative methods to explore and investigate the experience of men with diabetes who have ED; (b) included men with diabetes aged 18 years or older who had experienced ED; (c) were an original peer-reviewed article and published between January 2010 and April 2020; and (d) were written in English.

Quantitative studies, literature reviews, conference proceedings, expert opinion papers, letters to editors, book chapters, non-refereed articles, published abstracts, and dissertations were excluded for this review.

2.4. Study selection

Study selection was undertaken in two steps. Firstly, first author performed an initial screening of the titles and abstracts of any retrieved abstracts and titles to determine eligibility. Then, two authors independently reviewed full texts of potential for eligibility criteria. The process of describing the selection of studies is summarized in Fig. 1.

2.5. Quality appraisal

The Critical Appraisal Skills Program (CASP) [25] assessment tool was used to assess the studies'

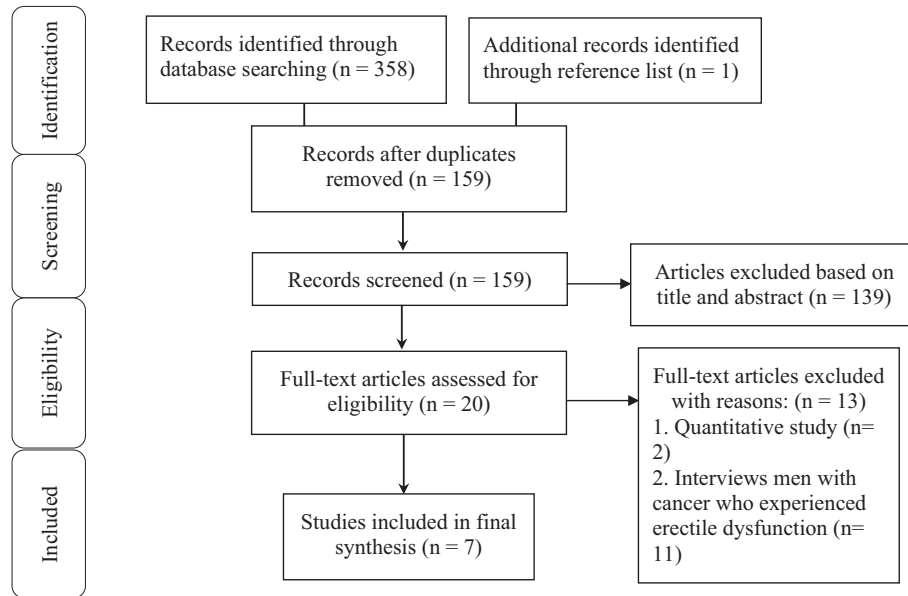


Fig. 1. Flow diagram of studies included through review process.

quality and trustworthiness. The tool contains ten items which were recorded as “1 (yes)”, “0 (no)” or “0.5 (can't tell)” to the questions. Ten items were: 1) clear statement of purpose, 2) appropriateness of methodology, 3) appropriateness of study design, 4) appropriateness of recruitment method, 5) appropriateness of data collection, 6) researcher-participants relationships, 7) ethical consideration, 8) research rigor, 9) clear statement of the results, and 10) research values. All studies were included in this

review when meeting the 6-score threshold (Table 1) [25]. Two authors independently assessed the methodological quality of included studies. When there was no agreement among two authors, an external reviewer participated in the process of decision.

2.6. Data extraction

All studies were extracted into a review matrix. The first author extracted the data, and these were

Table 1. Characteristics of included studies.

Study	Aim	Methodology	Participants	Quality Ranking
Sirait et al., 2019 [18]	Discover the experience of men with DM type 2 and sexual dysfunction	Phenomenology	15 men	8
Muhalla, 2019 [19]	Explore perception about sex and sexual dysfunction	Phenomenology	7 men	7
Cooper et al., 2018 [20]	Discover perception and experience of sexual functioning among men with DM type 2	Descriptive qualitative	47 men	9.5
Rutte et al., 2016 [21]	Investigate patients' needs and preferences for care about sexual problems	Descriptive qualitative	14 men, 11 women	9
Coimbra and Teixeira, 2015 [22]	Explore perceptions about sexuality and professional relationship	Descriptive qualitative	8 men	8.5
Jowett et al., 2012 [23]	Explore gay and bisexual men's experiences of sex and diabetes	Descriptive qualitative	8 men	8.5
Kolling, 2012 [24]	Explore the connection between illness experiences and the changes in men's sexuality	Descriptive qualitative	8 men	8.5

checked by second author. The characteristics and main findings of the included studies were presented in [Tables 1 and 2](#).

2.7. Data synthesis

Sandelowski and Barroso's inductive and interpretative technique [16] was used to synthesize data. First, the authors read each study several times and extracted the data across the papers. The authors independently coded each part of data and performed line-by-line coding of DED quotes by men. The authors' interpretation of the original data were included for analysis. The authors created visual mapping of selected key findings. Then, clustering and translating the findings into themes were

performed. The authors re-read each study and constantly compared themes across studies to match themes from one study with those from another. Finally, themes were generated, and theme titles were assigned, which depended largely on the decision and insights of the authors ([Table 3](#)). To ensure methodological rigor during analysis, together with a co-author, we independently coded the data from whole manuscripts. Audit trails including the details of data analysis and some of the decisions that led to the final themes were provided to the peer-review.

For the synthesis of qualitative research, the principles and processes must be sensitive to the core assumptions of the critical and interpretive paradigms [16]. Moreover, one area of emphasis is

Table 2. Summary of the main findings from original studies.

Paper	Main findings related to men with DED	
	Theme	Subtheme
Sirait et al., 2019 [18]	<ol style="list-style-type: none"> 1. Feel the sexual libido is still strong 2. Feel inferior to his partner 3. Trying to adapt to changes in sexual performance 4. Trying to treat sexual problems 	
Muhalla, 2019 [19]	<ol style="list-style-type: none"> 1. The perception of sex in a man's life 2. The perception of sexual dysfunction in a man's life 	<ol style="list-style-type: none"> 1. Primary need 2. Secondary need 1. Interfere with their primary needs 2. Does not interfere with their life 3. Psychological impact 4. Age as a cause of sexual dysfunction
Cooper et al., 2018 [20]	<ol style="list-style-type: none"> 1. Sexual functioning 2. Sexual well-being 3. Support for sexual functioning and sexual well-being 	<ol style="list-style-type: none"> 1. Sexual difficulties a key concern of living with diabetes 2. Need for better understanding of the causes of sexual difficulties 1. Loss of manhood 2. Reduces emotional intimacy and relationship quality 1. Not feeling supported by healthcare professionals 2. A silent and unsolvable problem?
Rutte et al., 2016 [21]	<ol style="list-style-type: none"> 1. Experiences with sexual problems 2. Experiences and needs in care 3. Knowledge of possible causes of sexual dysfunction in diabetes 4. Experiences with discussing sexual problem 5. Preferences and ideas for improving care 	<ol style="list-style-type: none"> 1. Needs to discuss sexual problems 2. Preferences for type of care provider to discuss sexual problems with
Coimbra and Teixeira, 2015 [22]	<ol style="list-style-type: none"> 1. Perception about sexuality 2. Relationships with the health care professional about sexual matters 	
Jowett et al., 2012 [23]	<ol style="list-style-type: none"> 1. Erectile problems 2. Other physical problems 3. Disclosing diabetes to sexual partners 	
Kolling, 2012 [24]	<ol style="list-style-type: none"> 1. Diabetic disruptions to male gender identity 2. Masculinity and impotence 3. Doing away with diabetes 4. Gender difference in illness experiences 5. Risks and contradictions 	<ol style="list-style-type: none"> 1. The good husband versus good patient 2. Infidelity 1. Narratives of impotence 2. When diabetes interferes and that 'problem happens' 3. Enacting gender through sexual behavior 1. Performing gender: Rejecting insulin

Table 3. Meta-synthesis themes with translation of original study theme.

Paper	Personal sexual values	Lack of understanding of causes	Breaking of manhood and husband's role	Recovering masculinity	Negative experiences and needs in care
Sirait et al., 2019 [18]	Theme #1		Theme #2	Theme #3 Theme #4	
Muhalla, 2019 [19]	Theme #1 - Subtheme #1 - Subtheme #2	Theme #2 - Subtheme #4	Theme #2 - Subtheme #1 - Subtheme #2 - Subtheme #3		
Cooper et al., 2018 [20]	Theme #1 - Subtheme #1	Theme #1 - Subtheme #2	Theme #2 - Subtheme #1 - Subtheme #2	Theme #3 - Subtheme #2	Theme #3 - Subtheme #1
Rutte et al., 2016 [21]		Theme #3	Theme #1		Theme #2 Theme #4 - Subtheme #1 - Subtheme #2 Theme #5 Theme #2
Coimbra and Teixeira, 2015 [22]	Theme #1				
Jowett et al., 2012 [23]			Theme #1 Theme #2	Theme #3	
Kolling, 2012 [24]			Theme #1 - Subtheme #1 - Subtheme #2 Theme #2 - Subtheme #1 - Subtheme #2 - Subtheme #3 Theme #4	Theme #2 - Subtheme #3 Theme #3 - Subtheme #1 Theme #5	

the perceived degree to which the data analysis approach can be interpreted. For this paper, the synthesis component can be labeled as inductive.

2.8. Ethical considerations

This meta-synthesis did not include human subjects and was exempt from review by the Institutional Review Board of Prachomklao College of Nursing, Phetchaburi Province, Thailand.

3. Results

3.1. Search results

The systematic and manual search identified 159 articles after duplicates were removed. After title and abstract screening, 20 full-text articles were assessed for eligibility. Thirteen articles were excluded. Seven articles which fulfilled the appraisal criteria were included in this qualitative meta-synthesis (Fig. 1).

3.2. Study characteristics

All studies were published journal articles and presented information relating to the experience of men with DED. The included studies were

conducted in several countries including Indonesia (n = 2), Brazil (n = 2), Netherland (n = 1), USA and UK (n = 1), and South Africa and Malawi (n = 1). The studies employed in-depth interview (n = 7) and focus groups (n = 1) as methods for data collection. All studies incorporated an inductive data analysis including thematic analysis and content analysis. Six papers included exclusively male samples and one paper included mixed genders as the participants. In data analysis, the authors selected the quotes and summarized text, in particular the experience of men with DED. Participant ages ranged between 28 and 78 years. The sample size ranged from 7 to 47 patients with DED. The characteristics of the included articles are presented in Table 1.

3.3. Methodological quality

The overall score ranged from 7/10 to 9.5/10 which showed low-to high-quality articles (Table 1). Common strengths included: (1) clear reporting of study purposes, (2) the use of appropriate qualitative methodology, and (3) clear reporting of results. Weaknesses were mainly related to a lack of trustworthiness in data analysis and lack of clear explanation of relationship between researcher and

participants. Although one article had low quality based on the CASP criteria, each of the meta-synthesis themes is based upon results from several studies. This strategy enhances the degree of triangulation.

The results of this review include a synthesis of the experiences of men with diabetes who experienced ED. The five main themes synthesized from the literature are shown in [Table 3](#).

4. Personal sexual values

This theme focused on the strongly held sense of sexual intercourse or what men with diabetes think and feel about having sex. This theme was found in four papers [17–19,21]. Sex was perceived as an essential need for men with diabetes, although they experienced sexual dysfunction. They viewed that sex has a major value in a man's life and was an important issue in their life [17,18]. They explained that they still desire to engage in sexual intercourse because it responds to their physiological needs and is important in a couple's relationship [17,21]. One participant said that *“As a man, sex is ... it is a life need, primarily, that ... as a primary need”* [18].

However, some men with diabetes described that sex is not everything in their life, and they prioritized other things that are more important than sex. Thus, a decline or absence of an active sex life can be regarded as normal: *“... marriage is not dependent on it, is it?”* [18]

5. Lack of understanding of causes

Although men with diabetes described the causes of their sexual problems, some of them reported a lack of understanding of the causes of ED. This theme was featured in three papers [18–20]. They explained that getting older, their relationship, and mental problems such as stress were the causes of sexual dysfunction. Meanwhile, some of them were unaware that diabetes could cause sexual dysfunction. Most men with diabetes either had no idea or were puzzled about the reasons for their sexual problems. They preferred to know more about the possible reasons for ED as they wondered whether it was the diabetes itself or the diabetes medications' side effects that could cause sexual dysfunction. One participant mentioned that *“I don't know if it's because of the diabetes itself, or if it's the meds, or what. Maybe it's something else.”* [19]

6. Breaking manhood and husband's role

This theme is focused on the potential impact of ED among men with diabetes as reported in six

studies [17–20,22,23]. ED was shown to affect their masculinity, sexual function, and relationship with partners. Men with diabetes described their physiological problems with sexual difficulties, including loss of erection hardness and reduced sexual desire, ejaculation, and orgasm. They explained that these problems can have a profoundly adverse effect on the level of their satisfaction with sexual activity [19,22]. One participant said, *“So, this problem, diabetes ... and these sexual problems are very disturbing and very dangerous, exactly.”* [18]

Not only are there physical impacts, but ED significantly affects the men's psychological well-being and relationships due to the inability to have a normal sexual relationship. Some men with diabetes described that their spouses were disappointed about sexual life and did not understand their sexual problems [17,19,20]. Blame, mistrust, and being falsely accused of infidelity by their partners were the experiences that men with DED reported: *“She thinks I'm having sex with other women ... she says things like: ‘Why are you so weak? Have been bewitched by another lady? Did you have sex during the day?’”* [19] Moreover, ED causes men's self-esteem to decline. Men with diabetes experience uselessness and shame with their partner, which results in a lack of confidence, and subsequently, they feel sad and guilty.

A sense of loss of masculinity is also a result of ED. Men with diabetes experience a feeling of powerlessness as a man when they cannot perform their male sexual role. This role includes the failure to perform sexually and being unable to sexually satisfy their partners [17,19]. Thus, sexual dysfunction leads to a breakdown of their role as a husband.

7. Recovering masculinity

Men with diabetes described the ways to restore their manhood, in order to satisfy their partners. This theme was featured in four papers [17,19,22,23]. Men with diabetes tried many ways to overcome ED, such as using drugs or herbs. Some men used various forms of traditional methods due to their friends' recommendations [17]. They drank herbal beverages, such as those made from lemongrass and ginger, to increase their vitality. But their sexual problems were not resolved. Some applied traditional oil onto their penis over three times daily after bathing. But there was no change. One participant described that *“I have ever used a vitality tool. I mostly use traditional oil smeared ... there's nothing changed, or even there was a little change.”* [17] Some men with diabetes took oral medications such as Viagra to improve the presumed decline in their sexual

performance [17,23]. But they stopped taking the medication due to its side effects. Most importantly, however, some men with diabetes refused to take insulin because they perceived it as a visible marker of the disease, which made them appear as a weak person.

Many men with diabetes decided to disclose their diabetes and sexual problems to their partners because they hoped that they would understand and accept the condition [17,22]. Several men described that talking about sexual problems would make things worse; thus, they decided to avoid talking about the problems [19]. Moreover, they sought alternative ways to express affection including touching and massaging their wife, giving hugs and kisses to their wife, caring for their wife, and stroking (using the hand for masturbation).

8. Negative experiences and needs in care

This theme featured in 3 studies. This theme incorporated the experiences of men with diabetes seeking help from healthcare providers and their needs in care [19–21]. Many men with diabetes described not having the support that they needed to cope with sexual dysfunction [19]. They reported they were never asked, offered information, or educated about sexual dysfunction as being possible complication of diabetes at routine follow-up appointments. A few men with diabetes experienced unhelpful and hurtful responses including shaming and blaming. One participant said that *“I’ve shared my problem with them. But ... the nurse, she just said “Look at your health. You don’t look after yourself. If you started to take care of your body, your problem would go away.”* [19]

Men with diabetes reflected that they needed to discuss their sexual problems with medical providers but there were some barriers including embarrassment, insecurity, and feeling uncomfortable [19–21]. Moreover, they felt that providers were too overburdened and consultation times too short. One mentioned *“Nobody in nursing ever asked about it. Many times, I felt like talking, but I don’t have the guts.”* [21]

Men with diabetes described their health care desires and preferences. They expressed that health care providers should pay more attention about sexual dysfunction as a result of diabetes. They preferred to talk with healthcare providers and involve their partners in the discussion. They suggested that healthcare provider should ask patients with diabetes about their sexual problems and integrate this issue in standard diabetes care.

9. Discussion

This review synthesized the data from the qualitative evidence regarding the experience of men with diabetes who have ED that was collected in various counties. An important insight from this study was that sex greatly matters to men. This could explain why men are always in the mood for sex and constantly interested in having sex. For men, sex provides a real sense of attachment that they desire in this most intimate of all their relationships [26].

Thus, when the dysfunction occurs, men with diabetes feel disturbed when they experience significant changes in sexual functioning, such as an inability to maintain an erection and a loss of sexual interest [27]. In our study, men with diabetes perceived that good sexual health is indicated by responsive sexual desire and good sexual functioning. In line with this result, men with chronic diseases such as hypertension consider that having an erection, penetration, and ejaculation as well as making love well are the most valuable forms of sexual expression, which affirm masculinity [28,29]. This means that sexual performance plays a key role in the affirmation of masculine identity. According to Connell’s theory of masculinity, men learn that being a man is closely linked with valued characteristics such as strength, bravery, protectiveness, forcefulness, a sense of power, and sexual prowess [30]. Men note that sex and sexual satisfaction are vital sources of power, for example ‘being on top’ during lovemaking leads to a feeling of power. Having an erection and penetration are the factors to improve sexual prowess and are recognized as the most important forms of affirming and reaffirming masculinity [31].

DED has impacts on men’s emotional intimacy with partners and their sense of security in the relationships. It also damages their self-esteem as a man [32,33]. Actually, men believe that they have a greater responsibility for sexual activities and usually initiate sex with their partners as a way fulfilling a husband’s role. This finding is consistent with gender role theory, which proposes that men need to become sexually confident and to satisfy their partners [34]. The duty of husbands to have sex with their partner is also regarded as vitally important to their partners’ mental health [35]. After being affected by ED, men with diabetes experienced behavioral changes such as lacking sexual confidence and avoiding intimacy, which resulted in increased anxiety for both them and their partners. The end of a normal sex life was a result of this breakdown in the husband’s role, leading to

reactions in their partners such as negative feelings toward husbands. These reactions brought about a further loss of sexual intimacy. Thus, the most essential perceived sexual problem is that of the relationship and intimacy, which emerge as the reason for managing ED [27,33].

In trying to overcome this problem, most men with diabetes have to endure a marital relationship with a low quality of life. Other studies confirm that there is a relationship between suffering ED, a lower quality of life, and reduced intimacy among men and their partners [32,33]. Men with DED have attempted to address these problems through self-care and self-focus methods to regain their manhood. However, sexual dysfunction did not improve after using some methods such as combining conventional with traditional treatment [9]. Men tended to seek help when symptoms interfered with sexual life because they felt shame if they disclosed their sexual problems to others and lacked an understanding of the causes of ED. In line with this direction, men are less likely to discuss and seek help for their health problems when being treated in a stereotypically feminine way [36,37].

This review provides new insights into the reasons that men with diabetes reject the use of insulin for controlling their blood sugar. This rejection can be explained by the fact that men perceive insulin therapy as an unhealthy symbol of a weak person, which impacts their masculine image. According to masculine gender role identity, when illness is perceived as a weakness that lessens masculine expression and identity, men tend to engage in poor health behavior in order to achieve a masculine gender [37,38]. This misconception should be seriously taken into consideration for uncontrolled diabetes that can cause ED.

Another new insight coming out of the synthesis concerns the negative health care experience of men with diabetes and their desires. Nearly half of the studies reported a gap between what men with diabetes wanted from health care providers and what they received. There was dissatisfaction with the lack of information given and the short consultation times, which caused them to be unaware that diabetes can cause ED. Moreover, it was difficult for them to raise the problem with medical providers themselves due to embarrassment and fear of being accused. These situations also are revealed in other studies [39–41] and could result in a delay in treatment. It was determined that men with diabetes need a clear understanding of the association of diabetes and ED as well as other possible causes. In accordance with our findings, men prefer their doctor to communicate with them about treatment-

related effects on sexual functioning at the time of diagnosis or during follow-up appointments [9]. Therefore, strategies used to raise men's concerns of how to improve sexual function should be focused on the possible complications of diabetes.

To the best of our knowledge, most of the studies on experiences of having ED were conducted among groups having cancer survival ED and radiotherapy ED. Men in this group lost their erectile function abruptly as a side effect of the radiography treatment. However, the experience of having DED is unique from other types of ED as it gradually damages men's erectile ability and the severity can vary depending on the control of the disease. The types of DM and the duration of having DM also play a part in the diversity of DED. Those who suffer from DED have time to adjust their lifestyle and treat the disease to control erectile rigidity until they have permanently lost full rigidity. These causes may not only lead to a high prevalence of DED as compared with men without DM, but also to a more severe degree of DED [42].

9.1. The limitations of this study

Due to our search only yielding seven eligible studies, the quantity of data available for this meta-synthesis was limited. With regards to the characteristics of the participants in each study in this review, we found that the severity of ED was not presented. We assume that different degrees of ED can affect men in different ways. This should be accounted for in upcoming synthesis efforts. The findings of this study indicate that more work is needed in nursing intervention design and development to enhance the programs that are intended to support men in managing DED.

10. Conclusion

ED emerges as a disturbing issue for men with diabetes because they perceive that sex is a one's primary need. Men with diabetes manage their ED to diminish feelings of loss of manhood and fulfill the role of husband. Our synthesis of qualitative evidence suggests that there is still a need for support to increase health care providers' awareness to assist men with diabetes.

Health care providers should play more attention to sexual problems among men with diabetes. Informing men about diabetes-related sexual dysfunction should be done at first diagnosis and during follow-up appointments. Follow-up appointments should include screening for sexual problems. Nurses should explore and initiate

discussion about sexual life, which would help reduce the amount of embarrassment. Moreover, information on treatment options, as well as insulin treatment, should be provided to men with diabetes. Men with diabetes who suffer from ED should be referred to a specialist physician to treat ED. More in-depth research amongst men with diabetes with different severity levels of ED is needed to better understand sexual well-being and management.

Conflict of interest

There is no conflict of interest to disclose.

Acknowledgments

The authors would like to thank the Prachomklao College of Nursing Phetchaburi Province, Thailand, for funding this research.

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