

SEXUAL DYSFUNCTION IN WOMEN WITH TYPE II DIABETES MELLITUS

Rafika Sulastri¹, Iman Permana²
University of Muhammadiyah Yogyakarta^{1,2}
rafikans1107@gmail.com¹

ABSTRACT

This study aims to determine sexual dysfunction in women with type II diabetes mellitus. The research method used in this study was a literature review with database search techniques, including EBSCO, Scholar, pro-Quest, PubMed, Science Direct, and Scopus pH. After reviewing the literature, the study revealed several results of sexual disorders in women with type 2 diabetes mellitus: II, especially the factors of sexual dissatisfaction and depression. In conclusion, Based on the effect of reviews and articles, it was found that sexual dysfunction in women with type II diabetes mellitus is influenced by several elements, namely sexual satisfaction, and melancholy.

Keywords: Diabetes Mellitus, Sexual Dysfunction, Women

INTRODUCTION

Diabetes mellitus is a chronic condition, which occurs when glucose levels increase in the blood because the body is unable to produce much of the hormone insulin or the lack of effectiveness of insulin function IDF (2017). According to the American Diabetes Association (ADA) diabetes is a very complex chronic disease, which needs repeated medical treatment with a strategy of controlling the glycemic index based on multifactor risk.

Data from the World Health Organization (WHO) states that there are 422 million people in the world suffering from diabetes mellitus and there is an increase of around 8.5% in the adult population, it is estimated that there are 2.2 million deaths with a percentage due to diabetes mellitus that occurs before the age of 70 years, especially in countries with low and middle economic status. In fact, it is estimated that it will continue to increase by around 600 million people by 2035 (Kemenkes RI, 2018).

Sexual dysfunction in women Diabetes mellitus is caused by various mechanisms, namely hyperglycemia, infections, vascular disorders, nerves, and neurovascular. Hyperglycemia can reduce the hydration of the mucous membranes in the vaginal tissues, resulting in poor vaginal lubrication and dyspareunia. Hyperglycemia Also has the potential to cause dyspareunia, as it is associated with an increased incidence of genitourinary infections. Diabetes can also cause blood vessels and nerves to experience dysfunction which can result in structural and functional changes in the female genital apparatus so as to interfere with sexual response (Amelia et al., 2016).

Sexuality is part of the physical and emotional closeness that women want to feel during their lives despite their age. Even the elderly who are still physically able to perform and have a partner, as well as engage in sexual activity will get satisfaction (Bağ et al., 2019).

In the Diagnostic and *Statistics Manual* version IV of the American Psychiatric Association, and ICD-10 (*International Classification of Disease*) from WHO, this female sexual dysfunction is divided into 4 categories, namely sexual desire disorders, *arousal disorder*, *orgasmic disorder*, and *sexual pain disorder*. At the *International Conferenc On Sexual Medicine* (ICSM), 2015 stated that the prevalence of DSW in Asia was 40.2%.

Sexual dysfunction does not mean sexual dissatisfaction. Sexual satisfaction seems to be formed by personal sexual pleasure and the process between the individual and his partner, and not only because of the absence of sexual dysfunction or conflict, (Bijlsma-Rutte et al., 2017). Low desire, lack of sexual satisfaction, insufficient lubrication and vaginal infections have been recognized as major sexual problems in women with diabetes (Wany et al., 2017).

Female sexual function is a complex system with physiological and psychological roots involving several domains including desire, arousal, lubrication, orgasm and satisfaction aimed at achieving a state of well-being and a good quality of life (Ahmed et al., 2018). Despite the fact that the risk of developing diabetes and its complications. In fact, the sexual problems of women with diabetes and related risk factors have not been widely studied and are less clear and less noticed, (Amelia et al., 2016).

Based on the above background, this literature review intends to find out the perceptions and factors that affect sexual function in female type 2 DM patients.

RESEARCH METHODS

Search Techniques

Comprehensive and relevant database search techniques reviewed using database searches including EBSCO, Scholar, Pro Quest, PubMed, Science direct, and Scopus, Search strategies using terms related to type II diabetes in women and sexual dysfunction in women using synonyms for *sexual dysfunction* search using sexual dysfunction using sexual dysfunction and type 2 diabetes mellitus using *type II diabetes mellitus*, searches using the addition of *Boolean pharse* AND or OR to make it easier to search on each database, the results from the search obtained a total of 1,141 articles, database searches were collected from 2016 to 2021, because they wanted to dig up the latest information related to sexual dysfunction in female type 2 diabetes mellitus patients.

Table .1
List of Keywords and Their Synonyms

<i>Key Words</i>	<i>Synonymous</i>
<i>Sexuality</i>	<i>Sexual behavior</i>
<i>Diabetic type 2</i>	
Diabetes mellitus	
<i>Women</i>	<i>female</i>

Inclusion Criteria

The inclusion criteria used in database tracing are as follows: Regulars published from 2016 to 2021. English-language literature. Respondents used in the literature were adult and female clients. Respondents must be patients with type 2 diabetes. Exclusion Criteria, research articles that cannot be accessed completely.

Methods of Selecting and Organizing Articles

All articles that are filtered and analyzed are then entered from the literature review based on the quality and relevance to the *topic of the review*. To organize findings articles, researchers use *bibliographic software*, endnote, to help organize search-generated articles. Researchers create folders on endnote that are named after the database name that stores articles. Articles that have been published based on six databases with the results of researching (n= 1,141) articles, then completed by checking *duplication*, obtained the results (n = 289) of articles, so that the next stage of selection will be carried out as many as (n = 852) articles, then the article is completed based on *excluded* data based on titles and abstracts, results are obtained that the article is excluded based on population with (n=63) articles, *protocol* with (n=9) articles, *reviews* with (n=223) articles, and *topics* with (n=550) articles, in terms of potential articles as many as (n=7) articles. The next stage is to select data based on full *tex* (article content) in get *exclude* data based on *topic* (n = 1) and *non effect* (n = 0) so that you get the article to be *reviewed* as much as (n = 6) Article.

The next stage is for the researcher to read the *full text* of the article and examine whether the article meets the inclusion and exclusion criteria of the literature review. Research articles that meet the inclusion criteria of a number (N=6) will then be organized articles based on sexual dysfunction in female type II diabetes patients: There are factors that affect sexuality in diabetic patients *sexual satisfaction* (n=3), *psychology* (n=3).

RESULTS

Schematic/Tree Diagram (PRISMA)

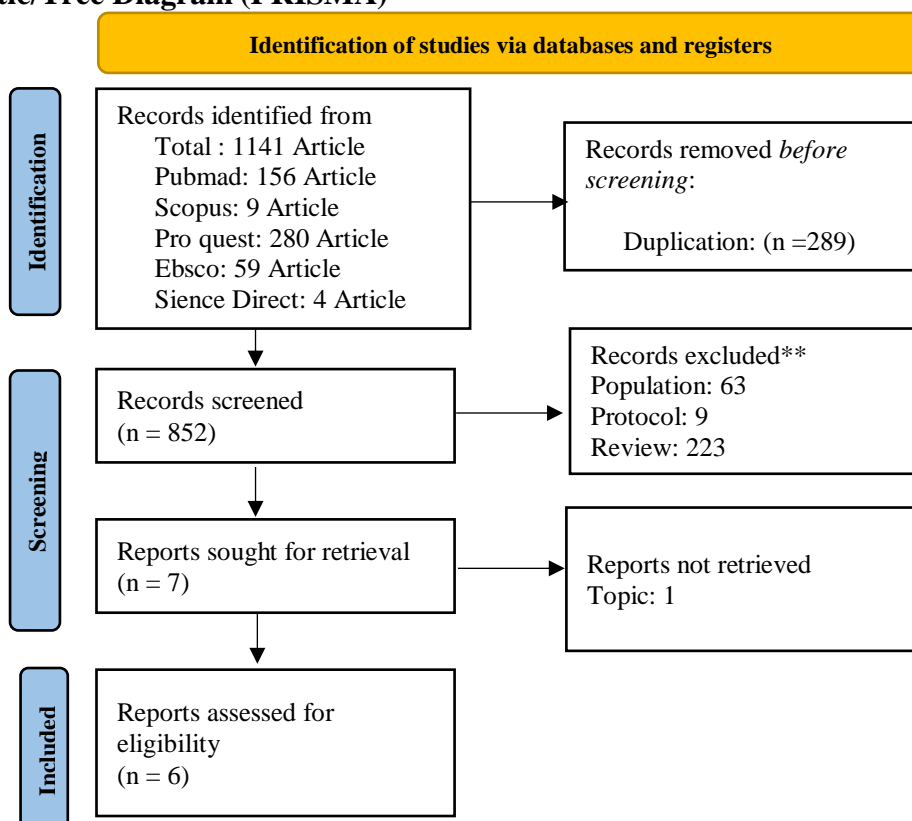


Figure. 1
Tree schematic/diagram (PRISMA)

Table. 2
Literature Review

Author Name, Article Title, Literature Type	Year	Aims	Findings
Bak et al., Relationships of sexual dysfunction with depression and acceptance of illness in women and men with type 2 diabetes mellitus, cross sectional	2017	the assessment of the influence of the psychological condition, the concentration of glycosylated hemoglobin, the duration of diabetes, the body mass index, the age, and the subjective acceptance of the illness on sexual disorders occurring in women and men with type 2 diabetes	Sexual disorders in patients with type 2 diabetes show a positive correlation with the occurrence of depression, which is more common in people with diabetes
Bijlsma-Rutte et al., Screening for sexual dissatisfaction among people with type 2 diabetes in primary care, Qualitative Descriptive	2017	The identification and discussion of sexual care needs in people with type 2 diabetes mellitus (T2DM) in primary care is currently insufficient. The objective of this study was to determine the prevalence of sexual dissatisfaction, sexual problems and need for help by using a screening instrument among people with T2DM in primary care	Prevalence of Sexual discontent
Ezeani et al., Evaluation of Female Sexual Function in Persons With Type 2 Diabetes Mellitus Seen in a Tertiary Hospital in Southeast Nigeria With Emphasis on its Frequency and Predictors, Quantitative cross sectional	2020	To evaluate female sexual function in persons with type 2 diabetes mellitus seen in tertiary hospitals in southeastern Nigeria with emphasis on frequency and predictors,	The prevalence of female sexual dysfunction in the study was high
Ahmed et al., Prevalence and differences between type 1 and type 2 diabetes mellitus regarding female sexual dysfunction: a cross-sectional Egyptian study, Quantitative cross-sectional	2018	To evaluate the female sexual dysfunction in both type 1 and type 2 diabetes mellitus (DM)	significant health problems among diabetic women
Trifi et al., Assessment of sexual function in women with diabetes mellitus: A case-control, case-control study	2016	To compare the scores of the different dimensions of sexual function of women with diabetes mellitus to a group of control women and to identify	diabetic women are significantly less satisfied with their sex life

		possible factors associated with sexual dysfunction in women with diabetes	
Kalka,	2018	to verify a moderating role of intensified depressive symptoms in relation to sexual satisfaction and relationship quality, as well as the relationship between these variables in the group of individuals with type 2 diabetes and sexual dysfunctions	There are differences in the level of sexual satisfaction in individual aspects. Symptoms of low-intensity depression that assume its effect on sexual contact with his partner is low.

The Results of the Literature Review

Search results from the data base through Pubmad, Scopus, Proquest, EBSCO, google scolar and Sience Direct with the same search keywords found 1,141 research articles, then after that was done skrening found 7 articles. Furthermore, selected through the abstract, 6 articles were obtained. The characteristic explanation of the article included in the *review* includes the average age, factors, samples, research design, instruments.

Age

Based on the literature, 3 articles discussed sexual dysfunction in female DM patients in the average age of adolescent respondents with an average age of 18 to 65 years. Three articles of sexual dysfunction in female DM patients who had adult and elderly respondents with an average age of 38 to 90 years.

Research Design and Sample

The cross-sectional research design used in the literature obtained as many as four articles with a total sample of 776 respondents, which were grouped into *control* and *intervention* groups, articles using a descriptive qualitative design there was only one article in the number of samples of 559 respondents and there is one article with a sample number of 100 respondents.

Instrument

Based on the literature the entire article uses the same instruments in the measurement of sexual dysfunction in women using the female sexual function index (FSFI) instrument. As for depression, the measuring instrument used is the *Beck Depression Inventory* (BDI) and *Acceptance of Illness Scale*.

DISCUSSION

The results of the study showed that there were four common journals, with differences in the level of sexual satisfaction in individual aspects and components of satisfaction in a relationship (Kalka, 2018). This study used the same design, namely cross sectional, with an average age in the study of 18-50 years, with a duration of three months to one year, as for the research from Bal et al., (2015) this study used a cross-sectional design by reducing the study and control group, with an average age of 24-49 years, as many as 176 people.

The measuring instrument used is the female sexual function index (FSFI). *Sexual dysfunction* in women was found to be significantly dissatisfied with their sexual life by 84%, (Trifi et al., 2016). This study is in line with Rutte et al., (2015) that 84% of women experience sexual dysfunction. This study using a measuring instrument of female sexual function index (FSFI), low sexual desire or desire, lack of sexual satisfaction, insufficient lubrication and vaginal infections have been recognized as major sexual problems in women with diabetes (Kadioglu et al., 2002). Research discusses that there is pain as part of lubrication, a component of orgasm in women with diabetes. sexual desire, arousal and lubrication, which are strongly correlated, form a single component, orgasm and satisfaction and pain (Ismail et al., 2014).

The results of the study showed that there were two common journals, namely depression is a factor that affects sexual dysfunction in female diabetes mellitus patients, 90% of depressive symptoms turned out to be a factor in the relationship between sexual satisfaction and relationship quality (Barakat et al., 2021). This study used a cross-sectional design, with the age of 21-60 years, the measuring instrument used was the *Beck Depression Inventory* (BDI) and *Acceptance of Illness Scale*, with a research time of approximately one year. Satisfaction levels in diabetic patients are low, people with diabetes are more often emotionally associated with fear and anxiety regarding the condition experienced. Psychosocial stress as a whole seems to have a greater impact on women than on men. In the study it was also mentioned that Gender role discrimination can also increase environmental psychosocial stress, as well as stress responses especially in women (Kautzky-Willer et al., 2016). Psychological factors have an important influence on therapeutic adherence for chronic diseases, the prevalence of anxiety is almost doubled in patients with type 2 diabetes compared to healthy individuals. In this study, the measuring instrument used was with the *Freiburger Illness Coping Scales*.

CONCLUSION

Based on the results of the discussion, it can be concluded that women with diabetes experience a lot of sexual dysfunction, this is influenced by factors of sexual discontent (n = 4), and psychological, namely depression (n = 2).

SUGGESTIONS

Suggestions for nurses in providing health services should start open communication about the sexuality of women with type 2 diabetes mellitus.

REFERENCE

- Ahmed, M. R., Shaaban, M. M., Sedik, W. F., & Mohamed, T. Y. (2018). Prevalence and Differences between Type 1 and Type 2 Diabetes Mellitus Regarding Female Sexual Dysfunction: A Cross-Sectional Egyptian Study. *Journal of Psychosomatic Obstetrics and Gynecology*, 39(3), 176-181. DOI:10.1080/0167482X.2017.1318123
- Amelia, H., Khatimah, H., & Istiana, I. (2016). Perbedaan Kejadian Disfungsi Seksual pada Wanita dengan Diabetes Mellitus dan Tanpa Diabetes Mellitus. *Medical Periodicals*, 12(2), 133-141. <https://ppjp.ulm.ac.id/journal/index.php/jbk/article/view/1861>

- Bąk, E., Marcisz, C., Krzemińska, S., Dobrzym-Matusiak, D., Foltyn, A., & Drosdzol-Cop, A. (2017). Relationships of Sexual Dysfunction with Depression and Acceptance of Illness in Women and Men with Type 2 Diabetes Mellitus. *International Journal of Environmental Research and Public Health*, 14(9). DOI:10.3390/ijerph14091073
- Bąk, E., Nowak-Kapusta, Z., Dobrzyń-Matusiak, D., Marcisz-Dyla, E., Marcisz, C., & Krzemińska, S. (2019). An Assessment of Diabetes-Dependent Quality of Life (ADDQoL) in Women and Men in Poland with Type 1 and Type 2 Diabetes. *Annals of Agricultural & Environmental Medicine*, 26(3), 429-438. doi:10.26444/aaem/99959
- Bal, M. D., Yılmaz, S. D., Çelik, S. G., Dinçağ, N., Beji, N. K., & Yalçın, Ö. (2015). Does the Diabetes of Type 2 Affect the Sexual Functions of Women? *Journal of sex & marital therapy*, 41(1), 107-113. doi:10.1080/0092623X.2013.842193
- Barakat, C., Yousufzai, S. J., Booth, A., & Benova, L. (2021). Prevalence of and Risk Factors for Diabetes Mellitus in the School-Attending Adolescent Population of the United Arab Emirates: A Large Cross-Sectional Study. *BMJ Open*, 11(9). doi:<http://dx.doi.org/10.1136/bmjopen-2020-046956>
- Bijlsma-Rutte, A., Braamse, A. M. J., Van-Oppen, P., Snoek, F. J., Enzlin, P., Leusink, P., & Elders, P. J. M. (2017). Screening for Sexual Dissatisfaction among People with Type 2 Diabetes in Primary Care. *Journal of Diabetes and its Complications*, 31(11), 1614-1619. doi:10.1016/j.jdiacomp.2017.07.020
- Ezeani, I., Onyeonoro, U., & Ugwu, E. (2020). Evaluation of Female Sexual Function in Persons With Type 2 Diabetes Mellitus Seen in a Tertiary Hospital in Southeast Nigeria With Emphasis on its Frequency and Predictors. *Journal of sex & marital therapy*, 46(2), 170-
- IDF. (2017). *IDF Diabetes Atlas Eight Edition 2017*. https://diabetesatlas.org/upload/resources/previous/files/8/IDF_DA_8e-EN-final.pdf
- Ismail, A. H., Bau, R., Sidi, H., Guan, N. C., Naing, L., Jaafar, N. R. N., & Midin, M. (2014). Factor Analysis Study on Sexual Responses in Women with Type 2 Diabetes Mellitus. *Comprehensive Psychiatry*, 55(1), S34-S37. doi:10.1016/j.comppsy.2012.12.028
- Kadioglu, A., Tefekli, A., Erol, B., Oktar, T., Tunc, M., & Tellaloglu, S. (2002). A Retrospective Review of 307 Men with Peyronie's Disease. *The Journal of urology*, 168(3), 1075-1079. <https://doi.org/10.1097/01.ju.0000024040.55662.36>
- Kalka, D. (2018). Depressive Symptoms, Sexual Satisfaction and Satisfaction with a Relationship in Individuals with Type 2 Diabetes and Sexual Dysfunctions. *Psychiatria Polska*, 52(6), 1087-1099. doi:10.12740/PP/OnlineFirst/85192
- Kautzky-Willer, A., Harreiter, J., & Pacini, G. (2016). Sex and Gender Differences in Risk, Pathophysiology and Complications of Type 2 Diabetes Mellitus. *Endocrine Reviews*, 37(3), 278-316. doi:10.1210/er.2015-1137
- Kemenkes RI. (2018). *Hari Diabetes Sedunia*. <https://pusdatin.kemkes.go.id/article/view/19041500002/hari-diabetes-sedunia-2018.html>
- Rutte, A., Splunter, M. M. V., Heijden, A. A., Welschen, L. M., Elders, P. J., Dekker, J. M., & Nijpels, G. (2015). Prevalence and Correlates of Sexual Dysfunction in Men and Women with Type 2 Diabetes. *Journal of Sex & Marital Therapy*, 41(6), 680-690. <https://doi.org/10.1080/0092623x.2014.966399>

- Trifi, M., Elkissi, Y., Slim, I., Chaïeb, M., Ben-Nasr, S., Chaïeb, L., & Ali, B. B. H. (2016). Assessment of Sexual Function in Women with Diabetes Mellitus: A Case-Control Study. *Sexologies*, 25(2), 78-84. doi:10.1016/j.sexol.2015.09.003
- Wany, F. A. Z., Yulia, Y., Kariasa, I. M., Waluyo, A., & Sofiani, Y. (2017). *Studi Fenomenologi: Pengalaman Disfungsi Seksualitas pada Pasien Wanita dengan Diabetes Mellitus Tipe 2 Studi Fenomenologi*. Universitas Indonesia. <https://lib.ui.ac.id/detail?id=20454869&lokasi=lokal>