

Research Article

The Relationship Between Mental Health and Sexual Function in Moroccan Pregnant Women

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- Mental Health
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Abstract

Background: Mental health can have an impact on sexual function in pregnant women. Mental health issues such as depression and anxiety can reduce sexual desire and affect the quality of sexual experiences. Physical changes during pregnancy can also influence sexual function. It is important for pregnant women to discuss any concerns with their healthcare provider to find solutions and maintain good mental and sexual health during pregnancy. Thus, this study investigates the relationship between mental health and sexual function in Moroccan pregnant women.

Methods: This descriptive-analytical, cross-sectional study was carried out among 257 pregnant women using WHO's maternal morbidity measurement tools. A tool used to assess the physical, mental, and sexual health of women, including experiences during pregnancy and childbirth. Accidental sampling was employed to select pregnant women who monitor their pregnancies in 10 Health Centers of Marrakech city, Morocco. A questionnaire was self-administered during prenatal visits at the health centers, where women are already coming to the facility for care. Spearman correlation test was used to determine the relationship between mental health and sexual function.

Results: The results reveal that prevalence of sexual dysfunction in pregnancy women is 48.20%. The mean (Standard Deviation) sexual functioning (total) score was 27.2 (6.90) from the available range of 0 to 41. The mean (SD) of anxiety and depression was 7.15 (5.83), 6.36 (4.94), respectively. Based on the spearman's correlation test, there was a significant correlation between sexual function and anxiety and no correlation with depression. Maternal age had a significant positive impact on sexual function.

Conclusion: Sexual functioning was significantly impacted by mental health, specially by anxiety. Educating the public about the protective influence of safe sex/intimacy on overall mental health is an important step towards promoting healthy sexual behaviors and reducing the negative impact of mental health problems on sexual functioning.

ABBREVIATIONS

ANC: Antenatal Care; BSSC-W: Brief Sexual Symptom Checklist for Women; GAD7: General Anxiety Disorder 7; PHQ-9: Patient Health Questionnaire 9; SPSS: Statistical Package for the Social Sciences; WHO: World Health Organization; WHODAS: World Health Organization Disability Assessment Schedule 2.0

BACKGROUND

Pregnancy is a period of transition with important physical and emotional changes [1]. Even in uncomplicated pregnancies, these changes can affect the quality of life of pregnant women and affect both maternal and infant health [2,3]. Health professionals in the field of prenatal maternal and child health try to satisfy their patients with respect to their experience during preconception and pregnancy periods [4]. Traditionally used pregnancy outcome measures, such as morbidity and mortality rates, remain essential. However, they are not sufficient on their

own because population health should be assessed, not only on the basis of saving lives, but also in terms of improving quality of life [1]. Mental health and sexual function can be impacted during pregnancy due to various physical and emotional changes [5].

Mental health is a state of well-being that enables a person to recognize their abilities and cope with everyday life's usual stresses [6]. Enjoying good mental health during pregnancy plays a crucial role in the progression of pregnancy and the fetus's development. Pregnancy is a critical period for women in which prenatal psychological distress can occur [7]. Further, unhealthy levels of anxiety and stress during pregnancy are related to pregnancy complications [8]. Mental health during pregnancy can be affected by various physical and emotional changes, leading to conditions such as depression, anxiety and stress. In fact, pregnancy can trigger depression in some women due to hormonal changes, stress, and lack of sleep. Pregnant women may experience increased anxiety related to the health of the baby, delivery, and changes in their body and life. Pregnancy can

also bring a significant amount of stress, especially for first-time mothers [9].

In contrast, adequate sexual functioning and intimacy are protective factors and often bolster mental health [10]. Sexual function is a process that involves various organs of the body, includes a woman's ability to reach sexual arousal, orgasm, and feeling of satisfaction, and enhances the quality of marital life. Some studies have shown a relationship between sexual function and mental health [11-13]. Women who have active and satisfying sexual function have higher emotional satisfaction and mental health. Sexual activity can help to release endorphins and improve mood, reduce stress, and increase feelings of closeness and intimacy in relationships. Additionally, sexual dysfunction can also be a symptom of underlying mental health conditions such as depression or anxiety, and these should be addressed by a healthcare professional [1,14]. Over the past decades, numerous instruments have been developed to measure mental and sexual health during pregnancy.

WHO has developed an assessment tool to measure maternal morbidity in low- and middle-income countries, including the mental and sexual health of pregnant women [15]. An essential component of the health care of pregnant women during pregnancy is to assess sexual function and mental health [14]. However, despite the importance and high prevalence of sexual dysfunction, most people do not address the problem due to embarrassment or lack of view it as a medical problem. To our knowledge, there is no study to describe the mental health and sexual function in Moroccan pregnant women. Therefore, due to the psychological and physiological health benefits of sexual health and likely positive effects on mental health, we conducted this research to determine the relationship between mental health and sexual function among Moroccan pregnant women.

METHODS

Study Design

The study is cross-sectional, providing a snapshot of mental health and sexual function, that has been approved by the research ethics committee of Rabat faculty of medicine and pharmacy. There will be no risk to the women who decide not to participate in the study, they will receive the same standard of care as those who participate in the study. Women who chose to participate, this study may cause some discomfort when answering personal questions. Potential benefits for participants include possible diagnosis and treatment for any reported morbidity or other condition. Women attending designated facilities for routine maternal health care were invited to participate in the study.

Sampling

In this study, 257 pregnant women were selected through cluster sampling method from health centers of Marrakech city, Morocco. Accidental sampling was employed to select pregnant women who monitor their pregnancies in this Health Centers. Ten health centers were selected (05 urban and 05 rural). The

inclusion criteria of this health centers are: Representation of the urban and rural areas and the number of prenatal visits exceeds 30 visits per month. All eligible women invited to participate. Women were invited to participate if they are in their third trimester of pregnancy (28 or more weeks). The exclusion criteria are minors under 18 years of age and women suffering from a mental or physical disability. The Data collection lasted two months at each site.

Data Collection Tools

Given the large sample size (257 women) and the time required for the questionnaire (45 to 65 minutes), the use of data collectors at the local level is recommended by the WHO to ensure data reliability. The choice of these data collectors was based on their experience in pre-natal care and data collection. This cross-sectional study used a questionnaire developed by the WHO to assess maternal morbidity, which includes various instruments that measure different aspects of maternal health. The questionnaire was translated into French and Arabic and validated by Moroccan experts. This tool evaluates the functionality and ability to perform daily tasks also includes a tool that evaluates mental health, the General Anxiety Disorder 7-item test (GAD-7), and the 9-item Patient Health Questionnaire (PHQ-9), to assess depression [16,17]. To measure sexual satisfaction and sexual and domestic violence, parts of some scores already validated are within the WOICE, such as the Brief Sexual Symptom Checklist for women (BSSC-W) and some questions from a questionnaire used in the Multi country Study on women's health and domestic violence against women of the WHO [18].

Training and Consent

As part of this study, data collectors who have experience in ANC service delivery, are trained to conduct mock interviews with participants. Training emphasize the importance of informed consent and procedures to reduce the risk of interviewers coercing patients to participate in this study. Data collectors trained specifically for this project, will administer informed consent forms (verbal and paper) to eligible women. Participation will be completely voluntary and non-participation will not affect a woman's access to or the type of care due to her. This will be expressed to all potential participants during both recruitment and the informed consent session. Additionally, informed consent will ask for access to the woman's medical records, those available at the facility and those she brings with her (mother-baby book, etc). If the woman is unable to give consent due to mental or physical impairment, she will not be asked to participate in the study. Additionally, data collectors will be trained to exclude minors under the age of 18.

Data Analysis

Data were analyzed using SPSS software (version 26). The descriptive statistics, including frequency and percentage, mean, and standard deviation, were used to describe the sociodemographic characteristics, sexual function, anxiety, and

depression. Spearman correlation test was used to determine the relationship between mental health and sexual function.

RESULT

In this study, 257 women were considered eligible for receiving the link for the questionnaire. Among the characteristics of our population, the mean age was 30 years and their age range was 17 to 44 years, just five women (1.56%) without a partner, and more than 80% were multiparous. More than 90% of the women were not employed. The majority of our study population had a Primary or less school level, and just 2.72% had a higher educational level (Table 1). Over one third of the population cannot read and just 9.73% took more than 60 min to arrive from their house to the health services. Approximately 16% of the participants were experiencing their first pregnancy (Table 1).

The mean (SD) of the total score of anxiety and depression were 5.60 (4.57), 4.62 (4.40), respectively, from the obtainable range of 2 to 10 for anxiety and of 2 to 9 for depression. The score > 10 was defined by the WOICE to retain the presence of anxiety and depression (Table 2). The majority of (83.65%) felt nervous, anxious or on edge, and becoming easily annoyed or irritable (83.65%). For depression, approximately 50% felt tired or having little energy. Most women have Sexual life during pregnancy (97.66%), and are dissatisfied (48.20%). The main reasons for dissatisfaction are little or no interest in sex (99.17%), and decreased vaginal lubrication (85.95%) (Table 2).

According the relationship between the score of sexual function, anxiety and depression in pregnant women, the distribution of anxiety is significantly different according to sexual satisfaction ($p = 0.035$). The distribution of depression is not significantly different according to sexual satisfaction ($p = 0.31$) (Table 3). Based on Spearman's correlation test, there was a significant correlation between maternal educational and sexual function ($p < 0.001$) (Table 4). On the other hand, no

Table 1: Sociodemographic characteristics of antenatal women (n = 257).

Characteristic	Variable	ANC (n = 257)
Maternal age	< 20	13 (5)
	20- 34	155 (60)
	> 35	89 (35)
Marital Status	Has partner	253 (98.44)
	No partner	4 (1.56)
Education	Primary or less	176 (68.48)
	Secondary	74 (28.79)
	Higher	7 (2.72)
Literacy	Cannot read	89 (34.63)
	Can read parts of sentence	105 (40.86)
	Can read whole sentence	63 (24.51)
Employed	No	233 (90.66)
	Yes	24 (9.34)
Travel time to facility, minutes	< 15	79 (30.74)
	15- 30	84 (32.68)
	30- 60	69 (26.85)
	> 60	25 (9.73)
Parity	1	43 (16.73)
	2 to 4	197 (76)

Table 2: Distribution of anxiety, depression and sexual satisfaction of antenatal women (n = 257).

Characteristics	Variables	ANC (n = 257)	%
Anxiety	Oui	215	83,65
	Non	42	16.34
Score d'Anxiety	5.90 ± 4.57		
	1-Feeling nervous, anxious or on edge	215	83.65
	2- Not being able to stop or control worrying	32	12.45
	3- Worrying too much about different things	86	33.46
	4- Trouble de relaxing	34	13.22
	5- Being so restless that it is hard to sit still	52	20.23
	6- Becoming easily annoyed or irritable	215	83.65
	7- Feeling afraid as if something awful might happen	125	48.63
Depression	Yes	112	43.57
	No	145	56.42
Depression score	4.62 ± 4.40		
	1- Little interest or pleasure in doing things	96	37.35
	2- Feeling down, depressed or hopeless	74	28.79
	3- Trouble falling asleep, staying asleep or sleeping too much	32	12.45
	4- Feeling tired or having little energy	112	43.57
	5- Poor appetite or overeating	72	28.01
	7- Feeling bad about yourself - or that you're a failure or have let yourself or your family down	78	30.35
	8- Difficulty concentrating on things, such as reading the newspaper or watching television	54	21.01
	9- Moving or speaking so slowly that other people could have noticed. Or, the opposite, being so fidgety or restless that you have been moving around a lot more than usual	21	8.17
	10- Thoughts that you would be better off dead or of hurting yourself in some way	42	16.34
Sexual life during pregnancy	No	6	2.33
	Yes	251	97.66
Satisfaction with sexual life	No	121	48.2
	Yes	130	51.79
Reason of sexual unsatisfaction	Pain during sex	53	43.8
	Little or no interest in sex	120	99.17
	Decreased vaginal lubrication	104	85.95
	Problems reaching orgasm	79	65.28

Table 3: Relationship between sexual function and depression, and anxiety in pregnant women (n = 257).

Characteristic	M(SD)*	Med(P25-P75)**	Relation to sexual function	P***
			IC 95% p/PR	
Anxiety	7.15 (5.83)	6.00 [2.00; 10.0]	-0.0601 (-0.181; 0.0627)	0.035
Depression	6.36 (4.94)	6.00 [2.00; 9.00]	-0.0140 (-0.136; 0.109)	0.31
Total sexual function score	27.2 (6.90)	29.0 [24.0; 32.0]	-	-

*Mean (Standard deviation)

**Median (Percentile25-Percentile75)

***Spearman correlation test

Table 4: Relationship between sociodemographic characteristics and sexual function in Moroccan pregnant women.

Socio-demographic characteristics		M(SD)	Med [P25-P75]**	Relation to sexual function
Maternal age	< 20 years	25.4 (11.2)	28.0 [21.0 - 31.0]	$P = 0.13$
	20-34 years	27.7 (6.76)	29.0 [25.0 - 32.0]	
	≥ 35	26.5 (6.33)	28.0 [21.0 - 32.0]	
Previous births	No previous birth	28.9 (5.61)	28.0 [25.5 - 32.0]	$P = 0.65$
	1 previous birth	25.7 (8.85)	28.5 [21.0 - 31.2]	
	2 +previous	28.9 (5.61)	28.0 [25.5 - 32.0]	
Maternal education	Primary or less	27.2 (6.07)	28.0 [24.0 - 32.0]	$P < 0.001$
	Secondary	24.9 (7.77)	25.0 [21.0 - 31.0]	
	Tertiary	29.9 (5.47)	31.0 [29.0 - 32.0]	
Marital status	No partner	23.2 (15.6)	30.5 [21.8 - 32.0]	$P = 0.81$
	Has partner	27.2 (6.72)	29.0 [24.0 - 32.0]	

*Sperman correlation test

**Median (Percentile25-Percentile75)

significant relationship was noted between sexual function and the other socio-demographic characteristics, maternal age ($p = 0.13$) marital status ($p = 0.81$), and Previous births.

DISCUSSION

Pregnancy can have a significant impact on a woman's sexual function and overall sexual health [13]. The physical and hormonal changes that occur during pregnancy can affect a woman's libido, vaginal lubrication, and ability to achieve orgasm [19,20]. Additionally, emotional factors such as stress, anxiety, and body image concerns can also impact sexual function during pregnancy. It is important for healthcare providers to be aware of these factors and provide appropriate support and guidance to women during this time [21].

According to the interpretation proposed by Weigel, et al. [22], the sexual function score less than or equal to 26.5 characterizes deficiency of sexual function. In our study, almost all the women (97.66%) had a sexual life during pregnancy and 48.20% presented a sexual dysfunction with a mean sexual satisfaction score of 27.2, a minimum of 0 and a maximum of 41. This is an important rate that remains close to those in the literature where sexual dysfunction during pregnancy varied between 66.7% and 87% [13,21,23].

Regarding the impact of pregnancy on women's sexual function, studies have yielded mixed results. Some studies have suggested that the sexual function score decrease as pregnancy progresses due to factors such as hormonal changes, physical symptoms of pregnancy, anxiety and stress related to pregnancy and future life changes [1,13]. However, other studies have not found significant differences between sexual function scores in pregnant and non-pregnant women [1]. It is important to note that pregnancy can affect sexual function in different ways for each woman, and factors such as overall health status, partner support, and emotional context may also play an important role. Therefore, it is recommended to discuss any concerns about sexual function with a qualified healthcare professional to obtain tailored advice for each individual case [8].

The results of the present study demonstrated a significant correlation between the total score of sexual function and

anxiety. Furthermore, Maternal age had a significant relationship with the higher score of sexual function. This study's results are similar to the result of the study conducted in 2015 by Seven and al [24], which found out that 77.6% of women suffering from sexual dysfunction during pregnancy had high levels of anxiety. However, our results are not consistent with the research carried out by Alizadeh and al (2012) [1], regarding the relationship between depression during pregnancy and sexual function. In fact, despite this result, 43.57% of the participants in our study showed signs of depression. The mean (Standard Deviation) of sexual functioning (total) score was 27.2 (6.90) from the available range of 0 to 41. The same result was found in the literature, notably in a previous Tunisian study [11] and in an African study [25]. In general, the prevalence of depression varied according to the studies from 7 to 51%. These rates were influenced by the socioeconomic and cultural level of each country [1].

CONCLUSION

Pregnancy is certainly a period of vulnerability for the woman and her partner, but this is not a reason for it to be considered as a tool for procreation only, but rather as a source of pleasure and relaxation. Cultural beliefs, traditions, and values play a significant role in shaping the attitudes and behaviors of individuals, including their attitudes towards sexual health and pregnancy. In some cultures, discussing sexual problems or expressing one's sexual needs and desires during pregnancy may be considered taboo, and healthcare providers may not be adequately trained or equipped to address these issues. However, it is important to note that sexual problems can occur during pregnancy due to hormonal changes, physical discomfort, and emotional stress. These issues can negatively impact a woman's quality of life and may even lead to complications during pregnancy and childbirth. Therefore, it is essential for healthcare providers to create a safe and supportive environment where pregnant women can openly discuss their sexual concerns and receive appropriate care.

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