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Mediating Role of Psychological Distress between Body Image Concerns and Sexual Functioning in Primiparous Women

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Abstract

The birth of a baby brings changes in the weight and body shape of a female, distorting their body image. Therefore, the aim of this study was to explore the relationship between body image concerns, psychological distress, and sexual functioning in primiparous women. A cross-sectional survey research design was used to recruit 120 primiparous women from gynecology clinics located in Punjab via purposive sampling. The participants' ages ranged from 18 to 35 years (M=26, SD=4.34). The data was collected through a survey booklet, including socio demographics and standardized assessment measures like the Body Image Concerns Inventory, Kessler's Psychological Distress Scale, and the Female Sexual Functioning Index. Descriptive statistics, Pearson product moment correlation, and mediation analysis were the main statistical tools used in this study. The study found a significant positive association between body image concerns and psychological distress. Similarly, body image concerns and psychological distress were negatively correlated with sexual functioning. The mediation analysis revealed that the association between body image concerns and sexual functioning was partially mediated by psychological distress. Increased body image concerns have a negative impact on the psychological and sexual well-being of primiparous women.

Keywords*:* Body Image Concerns, Female Sexual Functioning, Primiparous Women, Psychological Distress

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Introduction

Weight gain is expected during pregnancy for women (Jin, 2021), and changes in body shape and weight occur during this period (Tavakoli et al., 2021), sometimes even before a woman is aware of her pregnancy (Watson et al., 2015). However, women may not always fully embrace these changes in their body image (Grajek et al., 2022). According to the objectification theory, frequent experiences of objectification by others lead women to engage in self-objectification. This internalization of the outside perspective causes women to evaluate their bodies based on other people's perceptions (Fredrickson & Roberts, 1997). Women tend to have negative self-evaluations when there is a discrepancy between their body image and society's standards of evaluation (Fredrikson & Roberts, 1997). In societies where the ideal female body type is significantly thinner than the average and characterized by physically incompatible features like large breasts and low body fat (Calogero et al., 2011), self-objectification often results in negative self-

perceptions. Self-objectification, where women view their bodies as objects for others' pleasure, can lead to negative psychological outcomes, including an increased risk of poor body image (Dryden & Anderson, 2019; Grippo & Hill, 2008). Poor body image can lead to negative psychological effects such as anxiety, depression, and low self-esteem, as evidenced by studies (Ren et al., 2018; Xie et al., 2011). Similarly, stress, anxiety, and depression significantly affect sexual functioning (Effati-Daryiani et al., 2021). Based on self-objectification theory, this study speculated that childbirth leads to physical changes in a female's body, causing increased body image concerns. These increased body image concerns can lead to psychological distress, which can lower sexual functioning, particularly for those who struggle to overcome these changes.

Body image is defined as the perception of an individual about his or her own body, greatly influenced by how they perceive others reacting to their body's function, shape, and appearance (Zhang et al., 2022). It has significant associations with both mental and physical health (Rodgers et al., 2023). Body image concerns are linked to psychological distress (Rashid et al., 2021) and can lead to dissatisfaction, anxiety, depression, and disordered eating (Bellapigna & Kalibatseva, 2023; Carr et al., 2023; Diengdoh & Ali, 2022). Females with a negative body image may experience reduced sexual attraction and an increased risk of anxiety and depression (Pirnia et al., 2020; Simbar et al., 2020). Similarly, females with major depression are more susceptible to sexual dysfunction (Eissa et al., 2022).

Furthermore, research has shown that females with a positive body image tend to be more sexually active compared to those who are slightly overweight (Anatale & Kelly, 2015). Additionally, positive body image, independent of body weight, is associated with better overall sexual functioning (Weaver & Byers, 2007). Increased body image concerns have been linked to more difficulty achieving orgasm and lower sexual arousal in both males and females (Sanchez & Kiefer, 2007). Body image has also been found to have a significant relationship with various aspects of sexual functioning (Nazarpur et al., 2021). Given the influence of social media and evolving beauty standards, body image dissatisfaction among women experiencing pregnancy is a pressing concern. However, in countries like Pakistan, where cultural and religious values restrict open discussions on sexual functioning, there is limited understanding of how body image concerns intersect with sexual well-being.

Method

After receiving approval from the Institutional Review Board (IRB) under the reference number KC/ORIC/ERC/2022/005, a quantitative cross-sectional research design was employed to purposively recruit 120 primiparous women visiting gynecology clinics. All participants were recruited after signing informed consent. The mean age of participants was (M=26, SD=4.34) years. The inclusion criteria for this study were women visiting gynecology clinics, having given birth to their first child two months ago, having an age range of 18–35 years, and having a sexually active partner. The exclusion criteria for this study were divorced primiparous women, unmarried females, multiparous and nulliparous women, facing fertility issues like polycystic ovary syndrome (PCOS), suffering from certain health conditions such as acromegaly and postpartum psychosis, and having given birth to a child more than 12 months ago.

Measures

Body Image Concerns Inventory (BICI)

The Body Image Concerns Inventory is a 19-items, self-reported measure that assesses body image dysmorphic concerns (Littleton et al., 2005). Individuals rated their frequency

of experiencing a specific feeling or behavior on a 5-point Likert scale, ranging from 1 (never) to 5 (always). The total score is calculated by summing up all the responses. The higher scores indicate high dysmorphic body image concerns. A reliability index of 0.94 for BICI was reported in this study.

Kessler's Psychological Distress Scale (KPDS)

The Kessler's Psychological Distress Scale consisted of 10 items that measured anxiety, depression, and level of distress (Kessler & Mroczek, 1992). The responses are evaluated using a 5-point Likert-type scale, ranging from 1 (none of the time) to 5 (all of the time). The responses are summed up to generate a total score (range=10-50), with higher scores indicating greater psychological distress. The Kessler's Psychological Distress Scale's reliability value in this study was 0.94.

Female Sexual Functioning Index (FSFI)

The Female Sexual Functioning Index is a 19-item self-reported measure to assess female sexual functioning (Rosen et al., 2000). This scale records the participant's responses in a Likert-type format (0–6). The higher score on the FSFI indicates high sexual functioning. The Cronbach's alpha value of FSFI for this study was 0.82.

Procedure

A sample size of 120 primiparous women was recruited between May and August 2022 from three gynecology clinics in government and private hospitals via the purposive sampling technique. All participants were provided with information regarding the purpose of the study through the participant information sheet. The data were collected through a questionnaire booklet that includes a sociodemographics information sheet (age, family system, weight, BMI, residence type, delivery type, etc.), and English versions of a female sexual functioning index (FSFI), a body image concern inventory (BICI), and a Kessler psychological distress scale (KPDS). Each participant took 25–30 minutes to complete the questionnaire. The questionnaire booklet was completed by all participants, and there was no missing data. At the end of the participant's participation, the principal investigator debriefed them and collected their opinions about the study.

Statistical Analysis

The data was analyzed using SPSS version 26 and Hayes Macro Process version 4.0. Descriptive statistics, Pearson product moment correlation, and mediation analysis were statistical tools used in this study.

Results

The researcher selected 120 participants from 160, excluding 40 who did not meet inclusive criteria or had missing data, resulting in a final sample size of 120. A descriptive statistics was carried out to identify the demographic characteristics of the recruited participants (Table 1). Table 1 indicates the sociodemographics characteristics of the participants. The mean age of participants was 26.00 (*SD = 4.34*). Similarly, the mean weight of participants before pregnancy and after childbirth was 60.97 and 70.97 kg, respectively. The majority of the recruited participants had given birth to a child through a Cesarean-section (F = 71, % = 59.2). The study found that 61.7% of participants had completed their graduate studies, with the majority (65%) from rural areas and living in nuclear families (56.7%).

Table 1

Demographic Characteristics of Primiparous Women (N=120)

Variables	*M (SD)*	*F (%)*
Age (years)	26.00 (4.34)	
Weight (kg)		
Pre-pregnancy	60.97 (10.42)	
After Childbirth	70.97(11.67)	
BMI	25.77(4.56)	
Mode of delivery		
NVD		49 (40.8)
C-section		71(59.2)
Education		
Undergraduate		17(14.2)
Graduate		74(61.7)
Postgraduate		29(24.2)
Residence Type		
Rural		78(65.0)
Urban		42(35.0)
Family Type		
Nuclear		68(56.7)
Joint		52(43.3)

Note: *M*= mean, *SD*= standard deviation, *F*= frequency, *%*= percentage, BMI= Body mass index, NVD= Normal Vaginal Delivery, C-section= Cesarean section

Table 2

Intercorrelation of Body Image Concerns, Psychological Distress and Sexual Functioning in Primiparous Women (N=120)

Variables	1	2	3
1. Body Image Concerns	-		
2. Psychological Distress	.42***	-	
3. Sexual Functioning	-.37***	-.39***	-
M	2.47	2.87	2.86
SD	.85	1.02	.91

Note. *p<0.05, **p<0.01, ***p<0.001

According to Table 2, body image concerns are significantly related to psychological distress (r =.42, p<0.001) and sexual functioning (r = -.37, p<0.001). Similarly, psychological distress was significantly related to sexual functioning in primiparous women (r (120) = -.39, p<0.001). The primiparous women who had more body image-related concerns and psychological distress were more likely to have lower sexual functioning.

Figure 1

Mediational Model for Body Image Concerns, Psychological Distress and Sexual Functioning

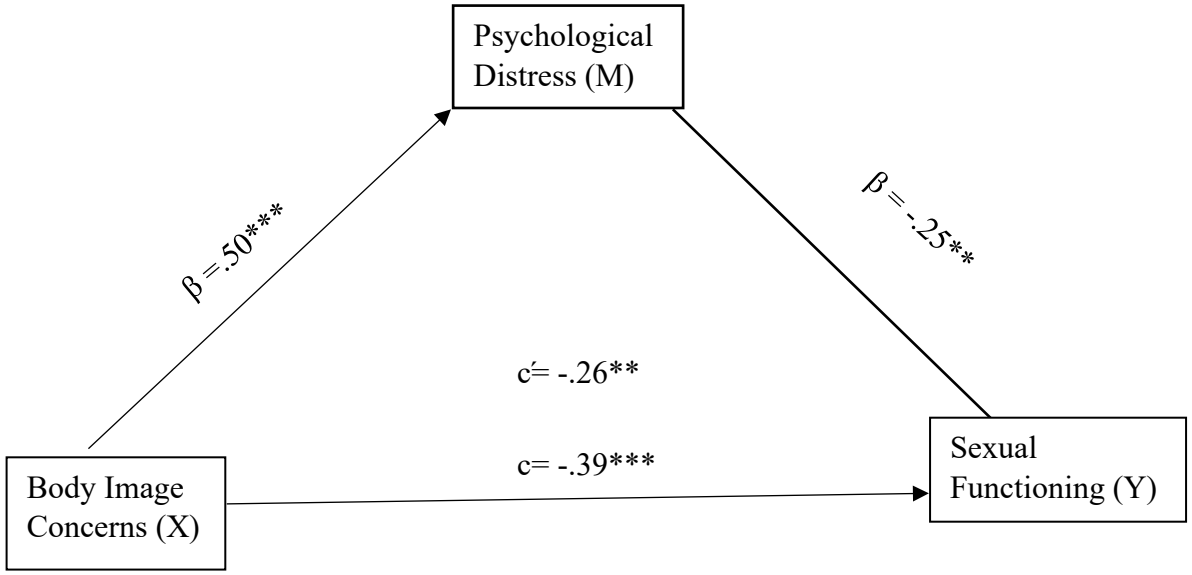

Table 3

Regression Coefficients, Standard Error, and Model Summary Information for the Body Image Concerns, Psychological Distress and Sexual Functioning in Primiparous Women (N=120)

		Consequent						
		PD*(M)*				**SF*(Y)***		
Antecedent		***B***	***SE***	***p***		***B***	***SE***	***p***
BIC(X)	*A*	.50	.10	.00***	*c′*	-.26	.09	0.00**
PD(M)		---	---	---	*b*	-.25	.08	0.00**
Constant	*I*	1.62	.26	.00***	*I*	4.26	.26	0.00***
		R^2=.17			R^2=.20			
		F(1,118)=25.45, *p=0.00***			*F*(2,117)=14.73 , *p=0.00***			

Note. BIC= Body image concerns, PD= Psychological distress, SF= Sexual Functioning
*p<0.05, **p<0.01, ***p<0.001

Table 3 indicates significant total effects of body image concerns on sexual functioning of primiparous women (β= -.39, *SE* =.09, p< 0.001). Furthermore, Table 3 indicates significant effects of body image concerns on psychological distress (β= .50, *SE* =.10, p<0.001) and psychological distress on sexual functioning (β= -.25, *SE* =.08, p<0.01). Findings revealed that psychological distress significantly partially mediates a relationship between body image concerns and sexual functioning in primiparous women, as after controlling psychological distress the direct effects of body image concerns on sexual functioning is reduced (β= -.26, *SE* =.09, p<0.01) but c′path is still significant.

Table 4
The Indirect Effect of Body Image Concerns on Sexual Functioning through Psychological Distress in Primiparous Women (N=120)

Indirect Path	Unstandardized Path	Standardized Estimate	Lower Level	Upper Level
Psychological Distress	-.13	.06	-.26	-.03

Furthermore, this study utilized Hayes's bootstrapping approach (2018) to investigate the mediating role of psychological distress in the association between body image concerns and sexual functioning, based on mediation assumptions from Baron and Kenny (1986) and Hayes and Preacher (2013). Indirect effects were also checked on over 5000 bootstrap samples by estimating at a 95% confidence interval. Results depict that the total indirect effect of body image concerns via psychological distress on sexual functioning in primiparous women is statistically significant.

Discussion

The aim of this study was to investigate a relationship between body image concerns and sexual functioning and whether this relationship is mediated by psychological distress in primiparous women. This study determined that body image concerns were significantly negatively related to sexual functioning in primiparous women. The findings of this study are consistent with the findings of studies conducted in the past (Nazarpur et al., 2021; Sanchez & Kiefer, 2007; Weaver & Byers, 2007). The relationship between body image and sexual function can be influenced by women's focus on their bodies, which can distract them from positive sexual feelings and partner signs, leading to reduced self-efficacy and sexual pleasure, thereby reducing sexual desire and intimacy (Horvath et al., 2020).

This study also determined that body image is significantly positively related to psychological distress, as supported by the findings of studies conducted in the past (Rashid et al., 2021). This could be explained by the fact that primiparous women engage themselves in upward social comparison and evaluate their bodies to meet social standards. The perception of their bodies as not meeting society's beauty standards can cause psychological distress. Furthermore, there was a negative relationship between psychological distress and sexual functioning in primiparous women, supported by the findings of the study conducted by Eissa et al. (2022). The relationship between psychological distress and sexual functioning may be explained by the fact that psychological distress decreases the sexual libido of a primiparous woman, which negatively influences their sexual functioning.

The study found that psychological distress plays a partial mediating role in the relationship between body image concerns and sexual functioning among primiparous women, marking it as the first investigation of its kind. This could be explained by the fact that in Pakistani society, females are blamed because of their infertility (Ali et al., 2023). Therefore, it is not crucial for primiparous women to experience psychological distress because of childbirth. However, females who are involved in self-objectification may have an increase in their body image concerns. The unsuccessful coping strategies adopted by primiparous women to overcome their negative body

image concerns will lead to psychological distress such as depression and anxiety. Hence, it is suggested that because of unsuccessful coping strategies to overcome negative body image concerns, primiparous women experience psychological distress, which consequently lowers their sexual functioning. Based on this knowledge, future research can explore the role of psychological distress in the connection between body image and sexual functioning in primiparous women using a larger sample size and a longitudinal research design to establish the causal impact of heightened body image concerns on diminished sexual functioning.

Strengths and Limitations

The main strength of this study lies in its identification of a link between increased body image concerns and reduced sexual functioning among primiparous women following childbirth. Additionally, the study explored the role of psychological distress as a mediator in this relationship. However, there are several limitations to consider. Firstly, the study did not account for the influence of religious and cultural values, such as veiling, which may impact women's body image and sexual functioning. The sample was not stratified based on veiling practices, as women who wear hijab often adhere strongly to cultural and religious codes of conduct. Secondly, the study did not examine whether husbands of primiparous women also experienced challenges in sexual functioning due to physical changes in their partners' bodies. Thirdly, the study did not establish a causal relationship between increased body image concerns and psychological distress, nor did it explore whether economic burdens associated with having a baby contributed to psychological distress among primiparous women.

Conclusion

In Pakistan, females are exposed to Western media culture, which promotes thinness as a beauty ideal. This exposure leads to the internalization of these standards, particularly due to the high usage of social media. During pregnancy and childbirth, women experience physical changes that can distort their body image, resulting in increased concerns. These body image concerns have adverse effects on the psychological and sexual well-being of women. As a result, this study aims to provide guidance to healthcare providers by emphasizing the importance of assessing the psychological and sexual health of primiparous women alongside their physical health.

Contribution of Authors

Anam Ihsan: Conceptualization, Investigation, Methodology, Data Curation, Formal Analysis, Writing – Original Draft
Raumish Masud Khan: Methodology, Writing - Reviewing & Editing, Supervision
Khair Muhammad: Formal Analysis, Writing – Original Draft, Writing - Reviewing & Editing

Conflict of Interest

There is no conflict of interest declared by the authors.

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Data Availability Statement

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [A.I.] upon the reasonable request.

References

Ali, B., Touseef, M., Niaz, U., Sarwar, S., Iqbal, S., Idrees, M., Younas, M. S., Rasool, S., Abbas, S., & Shafqat, H. (2023). Silent Suffering: A Qualitative Study On The Impact Of Infertility On The Social And Psychological Health Of Women In District Faisalabad, Pakistan, And Its Socio-Cultural Factors. *Journal of*

Applied School Psychology, *7*(6), 330-349.

Anatale, K., & Kelly, S. (2015). Factors influencing adolescent girls' sexual behavior: A secondary analysis of the 2011 Youth Risk Behavior Survey. *Issues in Mental Health Nursing*, *36*, 217–221. doi:10.3109/01612840.2014.963902

Bellapigna, C., & Kalibatseva, Z. (2023). Psychosocial risk factors associated with social anxiety, depressive and disordered eating symptoms during COVID-19. *AIMS Public Health*, *10*(1): 18-34. doi:10.3934/publichealth.2023003

Calogero, R. M., Tantleff-Dunn, S., & Thompson, J. K. (Eds.). (2011). Objectification theory: An introduction. In R. M. Calogero, S. Tantleff-Dunn, & J. K. Thompson (Eds.), Self- objectification in women: Causes, consequences, and counteractions *(pp. 3–21). American Psychological Association*. https://doi.org/10.1037/12304-001

Carr, M. M., Mannes, Z. L., Oberleitner, L. M. S., Oberleitner, D. E., Beitel, M., Gazzola, M. G., Madden, L. M., Zheng, X., & Barry, D. T. (2023). The impact of body image dissatisfaction on psychological distress and health-related quality of life among patients in methadone treatment. *American Journal on Addiction*. doi: 10.1111/ajad.13432

Diengdoh, I., & Ali, A. (2022). Body Image and Its Association with Depression, Anxiety, and Self-esteem among College going Students: A Study from Northeast India. *Indian Journal of Community Medicine, 47*(2), 218-222. DOI:10.4103/ijcm.ijcm_881_21

Dryden, C., & Anderson, J. (2019). The dark triad, trait-based self-objectification, and body image concerns in young women. *Personality and Individual Differences, 145,* 18. https://doi.org/10.1016/j.paid.2019.03.015

Effati-Daryani, F., Jahanfar, S., Mohammadi, A., Zarei, S., & Mirghafourvand, M. (2021). The relationship between sexual function and mental health in Iranian pregnant women during the COVID-19 pandemic. *BMC Pregnancy Childbirth*, *21*(1), 327. doi: 10.1186/s12884-021-03812-7.

Eissa, M.F., Missiry, M.A., Kamel, K.F.W., & Mahmoud, D. A. M. (2022). Sexual dysfunction and quality of life in female patients with major depression disorder. *Middle East Current Psychiatry*, *29*(1), 43. https://doi.org/10.1186/s43045-022-00206-z

Fredrickson, B. L., & Roberts, T. A. (1997). Objectification theory: toward understanding women's lived experience and mental health risks. *Psychology of Women Quarterly*, *21*, 73- 206. https://doi.org/10.1111/j.1471-6402.1997.tb00108.x

Grajek, M., Krupa-Kotara, K., Grot, M., Kujawińska, M., Helisz, P., Gwioździk, W., Białek-Dratwa, A., Staśkiewicz, W., & Kobza, J. (2022). Perception of the Body Image in Women after Childbirth and the Specific Determinants of Their Eating Behavior: Cross-Sectional Study (Silesia, Poland). *International Journal of Environmental Research and Public Health*, *19*(16), 10137. doi: 10.3390/ijerph191610137

Grippo, K. P., & Hill, M. S. (2008). Self-objectification, habitual body monitoring, and body dissatisfaction

in older European American women: Exploring age and feminism as moderators. *Body Image*, *5*(2), 173-182. doi: 10.1016/j.bodyim.2007.11.003

Horvath, Z., Smith, B. H., Sal, D., Hevesi, K., & Rowland, D. L. (2020). Body image, orgasmic response, and sexual relationship satisfaction: understanding relationships and establishing typologies based on body image satisfaction. *Sexual Medicine*, *8*(4), 740–51.doi: 10.1016/j.esxm.2020.06.008

Jin, J. (2021). Behavioral Interventions for Healthy Weight Gain During Pregnancy. *Journal of American Medical Association, 325*(20), 2126. doi:10.1001/jama.2021.7530

Kessler, R., & Mroczek, D. (1992). An update of the development of mental health screening scales for the US national health interview study. Ann Arbor, MI: Survey Research Center of the Institute for Social Research. University of Michigan.

Littleton, H. L., Axsom, D., & Pury, C. L. (2005). Development of the body image concern inventory. *Behavior Research and Therapy*, *43*(2), 229-41. doi: 10.1016/j.brat.2003.12.006

Nazarpour, S., Simbar, M., Khorrami, M., Jafari Torkamani, Z., Saghafi, R., & Alavi-Majd, H. (2021). The association between sexual function and body image among postmenopausal women: a cross-sectional study. *BMC Women's Health*, *21*, 1-9. https://doi.org/10.1186/s12905-021-01549-1

Pirnia, B., Homayounfar, N., Hosseini, N., Ebrahimi, F., Sadeghi, Z. H., & Malekanmehr, P. (2020). The predictive role of body image and sexual function in quality of life after modified radical mastectomy regarding the mediating role of emotion; a cross sectional study. *International Journal of Cancer Management*, *13*(11). https://doi.org/10.5812/ijcm.101371

Rashid, Z., Arzeen, N., & Shah, M. (2021). Body image and psychological distress among university students. *Journal of Postgraduate Medical Institute*, *35*(3), 181-4. https://doi.org/10.54079/jpmi.35.3.2695

Ren, L., Xu, Y., Guo, X., Zhang, J., Wang, H., Lou, X., Liang, J., & Tao, F. (2018). Body image as risk factor for emotional and behavioral problems among Chinese adolescents. *BMC Public Health*, *18,* 1179. https://doi.org/10.1186/s12889-018-6079-0

Rodgers, R. F., Laveway, K., Campos, P., de Carvalho, P. H. B. (2023). Body image as a global mental health concern. *Global Mental Health* (Camb), *10*, e9. doi: 10.1017/gmh.2023.2

Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C., Shabsigh, R., Ferguson, D., & D'Agostino, R. Jr. (2000). The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy*, *26*(2), 191-208. doi: 10.1080/009262300278597

Sanchez, D.T., & Kiefer, A.K. (2007). Body concerns in and out of the bedroom: implications for sexual pleasure and problems. *Archives of Sexual Behavior*, *36*, 808–820. doi: 10.1007/s10508-007-9205-0.

Simbar, M., Nazarpour, S., Alavi Majd, H., Dodel Andarvar, K., Jafari Torkamani, Z., & Alsadat

Rahnemaei, F. (2020). Is body image a predictor of women's depression and anxiety in postmenopausal women? *BMC Psychiatry*, *20*(1), 1-8. https://doi.org/10.1186/s12888-020-02617-w

Tavakoli, M., Hasanpoor-Azghady, S.B., Farahani, L. A. (2021). Predictors of mothers' postpartum body dissatisfaction based on demographic and fertility factors. *BMC Pregnancy Childbirth*, *21*(1), 8. doi: 10.1186/s12884-020-03501-x

Watson, B., Fuller-Tyszkiewicz, M., Broadbent, J., & Skouteris, H. (2015). The meaning of body image experiences during the perinatal period: A systematic review of the qualitative literature. *Body Image.* 102-13 doi: 10.1016/j.bodyim.2015.04.005

Weaver, A., & Byers, S. (2007). The relationships among body image, body mass index, exercise & sexual functioning in heterosexual women. *Psychology of Women Quarterly*, *30*, 333–339. https://doi.org/10.1111/j.1471-6402.2006.00308.x

Xie, B., Chou, C. P., Spruijtmetz, D., Reynolds, K., Palmer, P. H., Wu, Q., Gallaher, P., Johnson, C. A. (2011). Longitudinal analysis of weight perception and psychological factors in Chinese adolescents. *American Journal of Health Behavior*, *35*(1), 92. doi: 10.5993/ajhb.35.1.9

Zhang, X., Li, Y., Zhong, Y., & Wang, Z. (2022). Variables associated with body image concerns in acromegaly patients: a cross-sectional study. *Frontiers in Psychology*, 13.doi: 10.3389/fpsyg.2022.733864