Original Research Article

Enhancing gynaecological care: the obstetrics and gynaecological distress measurement scale

Aditi U. Kulkarni*, Tanvi D. Kothiwale, Elisa T. Moras

Dr. Khanade Hospital, Pune Maharashtra, India

*Correspondence:
Dr. Aditi U. Kulkarni,
E-mail: aditi.yuvanawellness@gmail.com

ABSTRACT

Background: Gynaecological patients are evaluated using a few scales that are not population-targeted, so a targeted tool was required, particularly for the Indian population where these problems are prevalent.
Methods: A short interview was done after a top-down survey. Then, from the results of the pilot study, some items were retained after the deletion of others.
Results: Using Cronbach's alpha, a reliability coefficient of 0.907 was obtained. With a value of 0.867, the split-half coefficient demonstrated a good degree of internal consistency. Convergent validity was 0.62.
Conclusions: The OGDMS is a useful tool for detecting possible psychological distress in pregnant women. OGDMS is a standardised instrument which can be used by psychologists, physicians, and patients to pinpoint probable mental health-related problem areas.

Keywords: Distress, Gynaecology, Mental health, Obstetrics, Physical health, Psychiatry, Psychology, Stress

INTRODUCTION

Gynaecological conditions refer to health issues that are specific to the female reproductive system. These conditions can range from minor concerns such as menstrual cramps and vaginal infections to more serious conditions such as cervical cancer and endometriosis. Gynaecological conditions can significantly impact a woman's quality of life, affecting her physical, emotional, and sexual well-being.[1-3] As such, it is important to understand the causes, symptoms, and treatments of these conditions to ensure proper care and management.

Gynaecological conditions caused 8640 deaths worldwide in 2019, and nearly 40% of women were affected by gynaecological diseases.[4] Adolescent girls are particularly vulnerable, with up to 60% experiencing menstrual and gynaecological problems.[5] Women's bodies undergo various physical changes throughout their lives, starting in adolescence with the onset of menstruation and involving bodily and emotional changes. Dysmenorrhea has been found to be associated with anxiety, depression and stress.[6] Its relevance is also high, especially among adolescent girls.[7] PCOS may come along with severe mental health issues such as depression, anxiety, body dissatisfaction etc.[8] Mental health issues are not only common in patients diagnosed with cystic fibrosis but it also impacts their family.[9] These problems, along with infertility, endometriosis and prolapse of pelvic organs, have become more prevalent due to factors such as a sedentary lifestyle, obesity, drastic lifestyle changes, and high levels of stress.[10-15]

Several scales, including Beck's depression inventory, the Kessler psychological distress scale, Beck's anxiety inventory, the Tilburg pregnancy distress scale, and the distress thermometer, have been widely used to assess the

mental health of obstetrics and gynaecological patients, particularly in relation to issues such as anxiety, depression, sleep problems, and stress levels. However, there is currently no scale that measures the overall mental health of these patients. These scales have primarily been used on pregnant women, women with gynaecological cancer, and those with possible fibrosis, with most other gynaecological conditions being overlooked, apart from cancer and chronic pelvic pain.[16-19] In India, gynaecological issues are diverse and lack adequate medical guidance, but there is a lack of research on the overall mental health of women with these problems. Consequently, there is a need for improved screening methods and scales.

The Obstetrics and Gynaecology Distress Measurement Scale (OGDMS) has been created with the aim of assessing the mental health of gynaecology patients in a comprehensive manner. This scale is intended to serve as a cohesive tool for doctors, psychologists, and patients, allowing them to identify potential problem areas. The OGDMS measures a patient's distress across domains including psychological, physiological, and environmental factors. Previous research has indicated that gynaecological problems may be caused by a range of factors that include physiological, psychological, and environmental aspects.[11-13,15] Therefore, it is possible that environmental factors may also contribute to the worsening of these issues, in addition to psychological and physiological symptoms.[11,20]

METHODS

A cross-sectional design was used for this study. It took place at Dr. Khanade Hospital in Pune, India over six months from October to March. The study aimed to create a tool for measuring distress in obstetrics and gynaecological patients. Indian females aged 18 to 60 years were the selection criteria of the sample. The sample had a median age of 30 and a standard deviation of 13.97. A consent sheet was filled by all the subjects participating in the study.

To develop the tool, a brief interview-based survey was initially conducted on 51 gynaecology and obstetrics patients to identify various psychological symptom trends. The patients filled out a short survey that gathered their basic demographic information and the reasons and duration of their gynaecological treatment. They also got an "emotional context" checklist to help them recognize their current emotional state, including mood swings, diminished self-confidence, excessive worry, overeating, and exhaustion. The patients were then interviewed based on their responses to understand their concerns. We considered the psychological, physiological and environmental domain due to this. 40 items were retained after item pooling was done on more than 200 items. A pilot study with 40 items was then administered to 22 gynaecology and obstetrics patients. Based on the statistical analysis of over 200 items, 20 items were selected for the final study, each rated on a 5-point Likert scale ranging from strongly agree to strongly disagree. The final tool, called OGDMS, has a maximum possible score of 100 and a minimum possible score of 20.

To evaluate the level of distress in women with obstetric and gynaecological issues, the OGDMS was used, which consists of 20 items. The scale includes items such as feeling anxious about one's current condition, blaming oneself for the present condition, having to make a lot of adjustments at work, feeling helpless due to constant pain, and losing one's sense of self.

The validity of the OGDMS was assessed using the mood and feeling questionnaire (MFQ Short Version- adult self-report), which is a self-report questionnaire consisting of 13 descriptive phrases used to evaluate an individual's recent behaviour or emotions. This questionnaire focuses on psychological variables, which is also the objective of the OGDMS, and it provides a quick analysis of the patients' psychological concerns.

RESULTS

The OGDMS was tested for correlation, reliability, and validity using the software SPSS version 24. Descriptive statistical analysis was done using the same (Table 1).

Validity

The validity of the OGDMS was evaluated by correlating it with the Mood Feeling Questionnaire (MFQ Short Adult Version). The correlation coefficient between the two scales was found to be 0.672 (Table 2).

Table 1: Descriptive statistics.

		OGDMS	Psychological	Physiological	Environmental
N	**Valid**	211	211	211	211
	Missing	0	0	0	0
Mean		56.0047	22.8720	19.5024	13.6161
Median		56.0000	23.0000	19.0000	14.0000
Mode		52.00[a]	24.00[a]	18.00	12.00[a]
Std. deviation		13.97668	5.85847	5.75481	3.66834
Variance		195.348	34.322	33.118	13.457
Skewness		0.063	0.169	0.133	-0.024

Continued.

		OGDMS	Psychological	Physiological	Environmental
Std. error of skewness		0.167	0.167	0.167	0.167
Kurtosis		-0.166	0.136	-0.438	-0.346
Std. error of kurtosis		0.333	0.333	0.333	0.333
Range		72.00	32.00	27.00	18.00
Minimum		23.00	8.00	7.00	5.00
Maximum		95.00	40.00	34.00	23.00
Percentiles	25	47.0000	19.0000	16.0000	11.0000
	50	56.0000	23.0000	19.0000	14.0000
	75	65.0000	26.0000	24.0000	16.0000
[a.]Multiple modes exist. The smallest value is shown					

Table 2: Validity.

		OGDMS	Mood feeling questionnaire
OGDMS	Pearson correlation	1	0.672[**]
	Sig. (2-tailed)		0.000
	N	211	211
Mood feeling questionnaire	Pearson correlation	0.672[**]	1
	Sig. (2-tailed)	0.000	
	N	211	211
[**]. Correlation is significant at the 0.01 level (2-tailed).			

Table 2: Reliability.

|		Value	.809
Cronbach's alpha	**Part 1**	Value	.809
		No. of items	10[a]
	Part 2	Value	0.862
		No. of items	10[b]
	Total No. of items		20
Correlation between forms			0.771
Spearman-brown coefficient	Equal length		0.871
	Unequal length		0.871
Guttman split-half coefficient			0.867
a. The items are: VAR00001, VAR00002, VAR00003, VAR00004, VAR00005, VAR00006, VAR00007, VAR00008, VAR00009, VAR00010.			
b. The items are: VAR00011, VAR00012, VAR00013, VAR00014, VAR00015, VAR00016, VAR00017, VAR00018, VAR00019, VAR00020.			
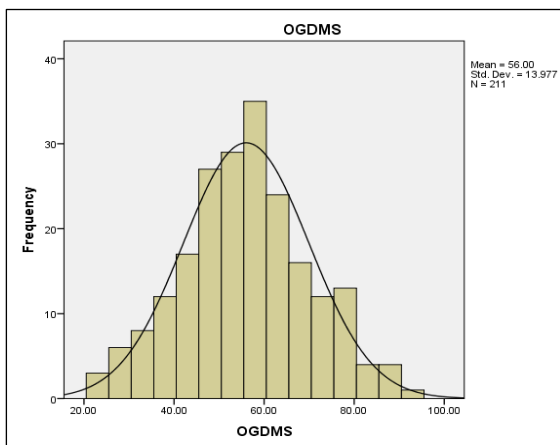
Figure 1: Frequency of OGDMS scores.

Reliability

The reliability of the OGDMS was evaluated using two different methods-Cronbach's alpha and split-half coefficient. The reliability coefficient using Cronbach's alpha was found to be 0.907 (Table 3). Similarly, the split-half coefficient was calculated to be 0.867 (Table 3).

Norms

The norms for the psychometric tool were established based on the scores obtained by the sample population. The following norms were established: total scores between 20-29 are considered very low, total scores between 30-39 are low, total scores between 40-59 are average, scores between 60-69 are high, and scores

between 70-100 are very high (Figure 1). These norms can be used to interpret the scores obtained by future users of the OGDMS.

Overall, the OGDMS demonstrated excellent reliability and moderate to high validity, and the established norms can aid in interpreting the scores obtained by future users.

DISCUSSION

The aim of this study was to create a comprehensive scale for assessing the psychological health of Indian women facing gynaecological challenges. This scale can aid doctors and psychologists in identifying potential psychological distress, proposing appropriate action plans, and reducing consultation time. Unlike previous research scales, this new scale is not restricted to any specific gynaecological population, making it applicable to all types of obstetrics and gynaecological issues. Prior research scales were not designed for the Indian context, raising concerns about their validity. According to a study, the Kessler psychological distress scales have questionable cultural validity and do not provide clinical norms for different cultural groups.[21] Moreover, they are not specific to gynaecology and are applied to the general population.[21] The menstrual distress questionnaire is another such tool assessing distress related to menstruation among women, however it has not been proven to be culturally valid, making it questionable to use in Indian settings.[22]

The OGDMS was designed with the gynaecological concerns of Indian women in mind and was validated using a sample group. The scale was found to have excellent internal consistency, indicating its reliability, and was correlated with the mood and feeling questionnaire (short adult version) to demonstrate its validity. The results suggest that the tool has moderate to high validity and can be used with the obstetrics and gynaecological population to identify potential distress and fulfil what it was aimed to do.

However, the study's small sample size and data gathered from a single hospital in an urban area limit the generalisation of the results. Moreover, the OGDMS is only an identification tool and cannot be used as a diagnostic tool in isolation. Participants' responses may be influenced by social desirability bias, their current mental state, contextual factors, and the observer's personal bias.

Despite these limitations, the OGDMS can provide patients with insight into their mental health issues and serve as a preliminary step in providing psychological treatment to women facing gynaecological problems. To maximise its reach, the scale could be translated into other regional and local languages, and a shorter version could be developed for quick assessment. Further research on this scale can be done by having a post-test to assess the patient's well-being after psychotherapy treatment.

CONCLUSION

To put it briefly, the OGDMS is a measuring tool used to assess the psychological wellbeing of women who are facing gynaecological issues. The validity and reliability of the scale were found to be high, indicating that it could be useful in identifying underlying mental health issues in this population. Therefore, it may serve as an initial step in providing psychological interventions to women with gynaecological problems.

REFERENCES

1. Gao X, Yeh YC, Outley J, Simon J, Botteman M, Spalding J. Health-related quality of life burden of women with endometriosis: a literature review. Curr Med Res Op. 2006;22(9):1787-97.
2. Wenzel L, Vergote I, Cella D. Quality of life in patients receiving treatment for gynecologic malignancies: special considerations for patient care. Inter J Gynecol Obstet. 2003 Oct;83:211-29.
3. Elsenbruch S, Hahn S, Kowalsky D, Öffner AH, Schedlowski M, Mann K, et al. Quality of life, psychosocial well-being, and sexual satisfaction in women with polycystic ovary syndrome. J Cli Endocrinol Metabol. 2003;88(12):5801-7.
4. Institute for Health Metrics and Evaluation. Gynecological diseases - level 3 cause, 2020. Available at: https://www.healthdata.org/results/gbd_summaries/2019/gynecological-diseases-level-3-cause. Accessed 17 March 2023.
5. Goswami P, Ahirwar G, Mishra P, Agrawal V. Adolescent gynaecological problems: a prospective study. J Evolu Med Dent Sci. 2015;4(102):16709-2.
6. Bajalan Z, Moafi F, MoradiBaglooei M, Alimoradi Z. Mental health and primary dysmenorrhea: a systematic review. J Psychos Obstet Gynecol. 2019;40(3):185-94.
7. Quraishi SR, Waghachavare VB, Gore AD, Dhumale GB. Are menstrual problems associated with the mental health? A cross sectional study among the Graduation college girls. IIUM. 2015;14(2).
8. Himelein MJ, Thatcher SS. Polycystic ovary syndrome and mental health: a review. Obstet Gynecol Sur. 2006;61(11):723-32.

9. Smith BA, Georgiopoulos AM, Quittner AL. Maintaining mental health and function for the long run in cystic fibrosis. Ped Pulmonol. 2016;51(S44):S71-8.
10. Pandey S, Bhattacharya S. Impact of obesity on gynecology. Women's Heal. 2010;6(1):107-17.
11. Joneja GS, Chopra S. Obstetrics–gynaecology and changed lifestyles of women. Med J Arm For India. 2012;68(1):2.
12. Kelly-Weeder S, Cox CL. The impact of lifestyle risk factors on female infertility. Wom Heal. 2007;44(4):1-23.
13. Wasser SK, Sewall G, Soules MR. Psychosocial stress as a cause of infertility. Fert Steril. 1993;59(3):685-9.
14. Desai S. Pragmatic prevention, permanent solution: Women's experiences with hysterectomy in rural India. Soc Sci Med. 2016;151:11-8.
15. Beaulah P. Prevalence of gynaecological problems and their effect on working women. Ind J Cont Nurs Edu. 2018;19(1):103.
16. Pop VJ, Pommer AM, Pop-Purceleanu M, Wijnen HA, Bergink V, Pouwer F. Development of the Tilburg pregnancy distress scale: the TPDS. BMC Preg Child. 2011;11(1):1-8.
17. O'Connor M. Detecting distress: introducing routine screening in a gynecologic cancer setting. Number 1/February 2017. 2017;21(1):79-85.
18. Harbeck E, Chambers S, Porter-Steele J, Anderson D, Sanmugarajah J, Hughes F, et al. Screening for distress in women with gynaecological cancer: adaptation of the distress thermometer for gynaecological oncology patients. Euro J Cancer Care. 2021;30(6):e13486.
19. Salter JR. Gynaecological symptoms and psychological distress in potential hysterectomy patients. J Psychosom Res. 1985;29(2):155-9.
20. Barthelmess EK, Naz RK. Polycystic ovary syndrome current status and future perspective. Frontier Biosc. 2014;E6(1):104-19.
21. Stolk Y, Kaplan I, Szwarc J. Clinical use of the Kessler psychological distress scales with culturally diverse groups. Inter J Meth Psych Res. 2014;23(2):161-83.
22. Vannuccini S, Rossi E, Cassioli E, Cirone D, Castellini G, Ricca V, et al. Menstrual Distress Questionnaire (MEDI-Q): a new tool to assess menstruation-related distress. Reprod BioMed Online. 2021;43(6):1107-16.