International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Kulkarni AU et al. Int J Reprod Contracept Obstet Gynecol. 2023 Jul;12(7):2077-2081
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20231913

Original Research Article

The obstetrics and gynaecological distress measurement scale: a promising tool for improving obstetrics care

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Received: 21 April 2023
Revised: 19 May 2023
Accepted: 20 May 2023

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ABSTRACT

Background: Screening done on obstetrics patients is based on a few scales which are not targeted towards the population, thus a need for a targeted tool was necessary especially for the Indian population where these issues are high and care provided lacks in quality.
Methods: A top down survey was conducted followed by a brief interview. A pilot study was then done out of which specific items were selected.
Results: Cronbach's alpha yielded a reliability coefficient of 0.907. Split-half coefficient yielded a high level of internal consistency with a value of 0.867. The convergent validity was 0.62.
Conclusions: The OGDMS is a valuable tool for identifying potential psychological distress in women needing obstetrics care. OGDMS is a unified tool for doctors, psychologists, and patients to identify potential problem areas related to mental health.

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

INTRODUCTION

The World Health Organization stresses the importance of both mental and physical, postnatal and antenatal healthcare for women.[1] According to a review and meta-analysis, there is a 19% prevalence of postpartum depression among women in India, which is highly significant.[2] The characteristics of the early environment, beginning even before birth or during pregnancy, may pose significant risks for long-term physical and mental health issues for an individual.

According to a research study, women with eating disorders are prone to various obstetric and gynaecological complications such as infertility, unplanned pregnancy, miscarriage, inadequate nutrition during pregnancy, postpartum depression and anxiety, sexual dysfunction, and complications during the treatment of gynaecological cancers.[3] Furthermore, having a baby with a small head circumference is also a common complication among such women. Fear of giving birth is also a common type of fear in women undergoing pregnancy, especially perinatal women.[4]

Women are more prone to different types of psychological disorders like anxiety, depression and eating disorders.[5,6] Women are more likely than males to experience eating disorders like bulimia and anorexia. Men and women are similarly affected by schizophrenia, but women are more likely to experience hallucinations.[6] Domestic violence affects women much more frequently than it does males.[6] Perinatal anxiety is also prevalent in low and middle income countries.[7] In a study conducted on rural women in India, the risk of postnatal depression was high and significant.[8] The risk factors for postnatal depression may involve environmental stressors like low socio-economic class.[9] Nuclear family structure and a poor marital

relationship also affects the prevalence of postpartum depression among women in India.[10]

Overall, we can see that women's suffering includes different factors like physiological, psychological and environmental factors. Furthermore, if left untreated, depression during pregnancy can affect the offspring in a number of ways such as neurodevelopmental problems and neurotransmitter changes.[11] This suggests that a mother's poor mental health may affect her as well as the offspring.

Beck's depression inventory (BDI), Kessler psychological distress scale, beck's anxiety inventory (BAI), and distress thermometer and Edinburgh postnatal depression scale (EPDS) are some of the scales used to assess the mental well-being of gynaecology and obstetrics patients.[12-16] The Edinburgh postnatal depression scale has been used most widely to assess for any depression symptoms in the postpartum period.[14] However, there is no scale that measures the overall mental health and distress of these women. In the Indian context, women require a lot of guidance for these and other issues in obstetrics.[17] Thus there is a need for better screening methods.

The aim of developing the Obstetrics and Gynaecology Distress Measurement Scale (OGDMS) was to provide a unified tool for doctors, psychologists, and patients to identify potential problem areas related to mental health. This scale focuses on assessing and comprehending the patient's distress across domains including psychological, physiological, and environmental factors.

METHODS

This study was a cross-sectional design. This study was conducted at Dr. Khanade Hospital in Pune, India for a period of six months from October 2021 to March 2021. The aim of this study was to develop a tool for assessing distress in obstetrics and gynaecological patients. The selection criteria of the sample consisted of Indian females aged between 18 and 60 years. The median age of the sample was 30 and standard deviation was 13.97. All subjects involved in the study had to fill in a consent sheet before participating.

Procedure

Initially, a brief survey was conducted through interviews with 51 gynaecology and obstetrics patients to identify psychological symptom trends. This was done to collect basic demographic information of the patients and their reasons for and duration of gynaecological treatment. Additionally, we provided an "emotional context" checklist to help patients understand their current emotional state, which includes mood swings, reduced self-confidence, constant worrying, overeating, and fatigue. We then interviewed the patients based on their chosen symptoms from the survey and other concerns in their lives.

Through this, three domains of psychological, physiological, and environmental distress were considered. Item pooling was done for the domains on more than 200 items, out of which only 40 items were finalised for the pilot test. A pilot study with 40 items was then conducted with 22 gynaecology and obstetrics patients. Descriptive statistics was done and normality of the curve was checked. After this, 20 items with less than 0.3 item-total correlation coefficient were deleted. So based on the statistical analysis, 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, named OGDMS, has a maximum score of 100 and a minimum score of 20.

To evaluate the level of distress in women with obstetric and gynaecological issues, we used the OGDMS. 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. We assessed the validity of the OGDMS using the Mood and Feelings 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. We also assessed the reliability of the questionnaire using Cronbach's alpha and split-half coefficient.

RESULTS

Using SPSS version 24 software, the researchers conducted descriptive statistical analysis to evaluate the reliability, validity, and correlation of the OGDMS (Table 1).

The researchers employed Cronbach's alpha and split-half coefficient to assess the reliability of the OGDMS. Cronbach's alpha yielded a reliability coefficient of 0.907. Similarly, the split-half coefficient yielded an internal consistency with a value of 0.867 (Table 2). The validity of the OGDMS was evaluated by correlating it with the Mood and Feeling Questionnaire (MFQ- short adult version), and the researchers found a validity correlation coefficient of 0.672.

Based on the sample population, the researchers established the norms for the OGDMS psychometric tool. A total score between 20-29 is considered very low, a score between 30-39 is low, a score between 40-59 is average, a score between 60-69 is high, and a score between 70-100 is very high (Figure 1). These norms can aid in interpreting 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 assist in interpreting future scores obtained by users.

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
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: Reliability.

		N of items	10[a]
	Part 2	Value	0.862
		N of items	10[b]
	Total N 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.			

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).			

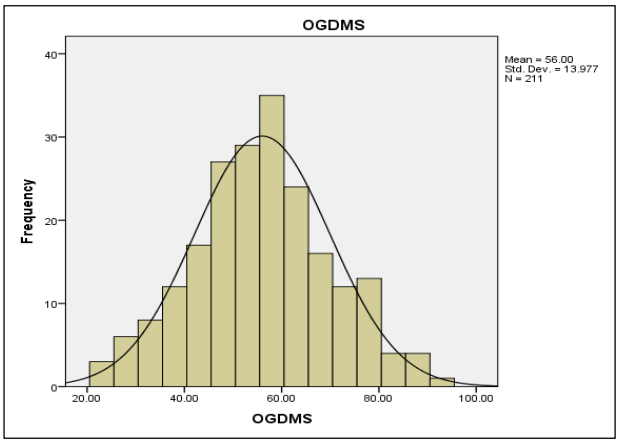

Figure 1: Frequency curve of total scores.

DISCUSSION

The current study aimed to address the pressing need for a comprehensive scale to measure the mental health of Indian women with gynaecological issues. The scale was developed to assist doctors and psychologists in diagnosing potential psychological distress, proposing appropriate interventions, and reducing consultation time. This scale is not limited to any specific gynaecological population and can be used for all types of obstetrics and gynaecological issues, thereby eliminating the discrepancy of using a specific scale to identify certain psychological concerns of a particular population, such as those dealing with fibrosis, cancers, and pregnant women. The scales used in previous studies were not based on an Indian setting, raising questions about their validity and

generalizability to the Indian population, for example, a study suggests that Kessler psychological distress scale versions K6 and K10 show inconsistent evidence in relation to cultural appropriateness and a lack of clinical norms for different cultural groups.[18] It is also used on the general population and doesn't consider obstetrics specifically.[18] A longitudinal study on the Tilburg pregnancy distress scale- revised notes that it may not be applicable to all types of population.[19] It is also noted that Tilburg pregnancy distress scale is based on healthy caucasian women.[12] Therefore, the current study's scale, known as the obstetrics and gynaecological distress measurement scale (OGDMS), fills a significant gap in the existing literature on mental health scales and contributes to a more accurate and comprehensive understanding of the mental health needs of Indian women with gynaecological and obstetrics issues. The OGDMS was designed to solve this issue and it does so by considering the Indian context. Furthermore, the use of this text in non-Indian settings can be done once the results are replicated outside the Indian context as well. Inferential statistics gave significant findings. Cronbach's alpha and corrected item-total correlation provided two results for the reliability for each variable. The internal consistency was demonstrated, proving significant reliability. The OGDMS correlated significantly with the mood feeling questionnaire, proving its high validity. This indicates that the tool can fulfil its purpose of detecting possible distress among the obstetrics and gynaecological population.

Data was gathered from patients at a solitary hospital located in an urban region, comprising individuals who spoke English, Hindi, and Marathi. However, it is important to note that the small sample size may be considered a limitation.

One factor that can be viewed both as an advantage and a disadvantage of the obstetrics and gynaecological distress measurement scale (OGDMS) is that it is designed to be used as an identification tool, rather than a diagnostic one. This means that the test is not intended to be used on its own, but rather in conjunction with psychotherapy to help clinicians identify potential psychological distress and develop an appropriate treatment plan. However, while the OGDMS is a useful tool in this regard, it is not without its limitations.

For example, one potential limitation of the OGDMS is that participants may be inclined to provide socially acceptable answers, rather than honest ones. Additionally, the results of the test can be influenced by a range of situational factors, such as the participant's current mental state and the observer's personal biases. Furthermore, individuals may struggle to assess themselves accurately, which could potentially lead to inaccurate results.

Despite these limitations, the OGDMS also has several potential advantages. For instance, it can be used as a self-report scale, allowing patients to gain insight into any mental health issues that may be concerning them. Moreover, the test can be translated into other regional and local languages to maximise its reach within the country. Additionally, a shorter version of the scale could be developed to make it more time-efficient and allow for quicker assessments, which could be particularly useful in busy clinical settings.

CONCLUSION

In summary, while the OGDMS has both advantages and limitations, it remains a valuable tool for identifying potential psychological distress in women needing obstetrics care. As with any psychological assessment tool, it is important to consider the test's limitations and use it in conjunction with other diagnostic tools and clinical observations.

ACKNOWLEDGMENTS

Authors would like to thank Dr. Deepa Khanade and the entire team of Dr. Khanade Hospital for their excellent support in data collection. Authors would like to thank Swarali Khaladkar (Psychotherapist at Yuvana Wellness) and Sana Hariyani (Psychotherapist at Yuvana Wellness) for their assistance in the preparation of the manuscript.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Kulkarni AU, Kothiwale TD, Moras ET. The obstetrics and gynaecological distress measurement scale: a promising tool for improving obstetrics care. Int J Reprod Contracept Obstet Gynecol 2023;12:2077-81.