Research Article

Development, Validation, and Examination of Psychometric Characteristics of the Obstetric Violence Scale for Pregnant Women

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Abstract

This study's objectives are to develop and validate a scale to assess obstetric violence (OV) experienced by women during pregnancy in Turkey. The scale consists of 18 items and three subdimensions: "Supportive Care and Information Support," "Achieving Professional Standards of Care and Effective Communication," and "Health Promotion." The scale explained 61% of the total variance. All goodness-of-fit indices indicated an acceptable fit between the model and the sample data. The overall Cronbach's α reliability coefficient was 0.91. The scale ranges from 0 to 72, with higher scores indicating more experience of OV.

Keywords

exposure to violence, obstetric, obstetric violence, pregnancy, women

Introduction

Obstetric violence (OV) is a type of violence against women that specifically targets pregnant women and violates their human rights (Garcia, 2020; Kilci et al., 2020; Molla et al., 2022). OV refers to abusive and disrespectful treatment by healthcare

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providers during various stages of the childbearing process, including fertility treatment, preconception care, pregnancy, childbirth, and the postpartum period. It also includes the performance of invasive or surgical procedures without informed consent, through coercion, or in violation of a woman's refusal (Garcia, 2020; Kilci et al., 2020). The World Health Organization (WHO) states that pregnant women in particular have certain rights, such as the right to seek, receive, and impart information, the right to be free from discrimination and the right to equal dignity (World Health Organization, 2014). However, despite these rights, pregnant women may be subjected to various forms of OV during pregnancy (Adane et al., 2021; Ibrahim et al., 2022; Mihret et al., 2020; Solnes Miltenburg et al., 2018; Yadav et al., 2022). Several studies have revealed alarmingly high rates of disrespect and abuse experienced by pregnant women during antenatal care services worldwide, with percentages ranging from 37 to 64.7 in Ethiopia (Adane et al., 2021; Ibrahim et al., 2022; Mihret et al., 2020) to 59.6% in India (Yadav et al., 2022).

Considering the vulnerable nature of pregnant women at this time and the importance of pregnancy and childbirth in their lives and families, it is crucial to assess the OV experienced by this particular group (Ogunlaja et al., 2017). The first step in studying OV, its causes, and potential solutions is to develop a reliable measurement tool to identify the problem and assess its prevalence. It is worth noting that no similar study or instrument has been identified in the literature for the assessment of OV specifically in women during pregnancy. Therefore, the development of this measurement tool is considered important for protecting and promoting maternal and newborn health, enhancing positive pregnancy experiences for women, and facilitating a positive transition to motherhood. Furthermore, due to the lack of a globally recognized measurement tool to assess OV during pregnancy, this measurement tool is expected to fill a gap in the field and contribute to the existing literature by providing a reference point for future studies in this context. In this context, the aim of this methodological study was to develop a scale to measure OV to assess pregnant women's experiences of OV during pregnancy. This study aimed to answer the following research questions;

1. Is the OV Scale (OVS) a valid tool for determining OV in pregnant women during pregnancy in Turkey?
2. Is the OVS a reliable tool for determining OV in pregnant women during pregnancy in Turkey?

Method

Study Design

The study is based on a methodological design. The present study resulted in the development of a scale. An overview of the study's methodology is presented in Figure 1.

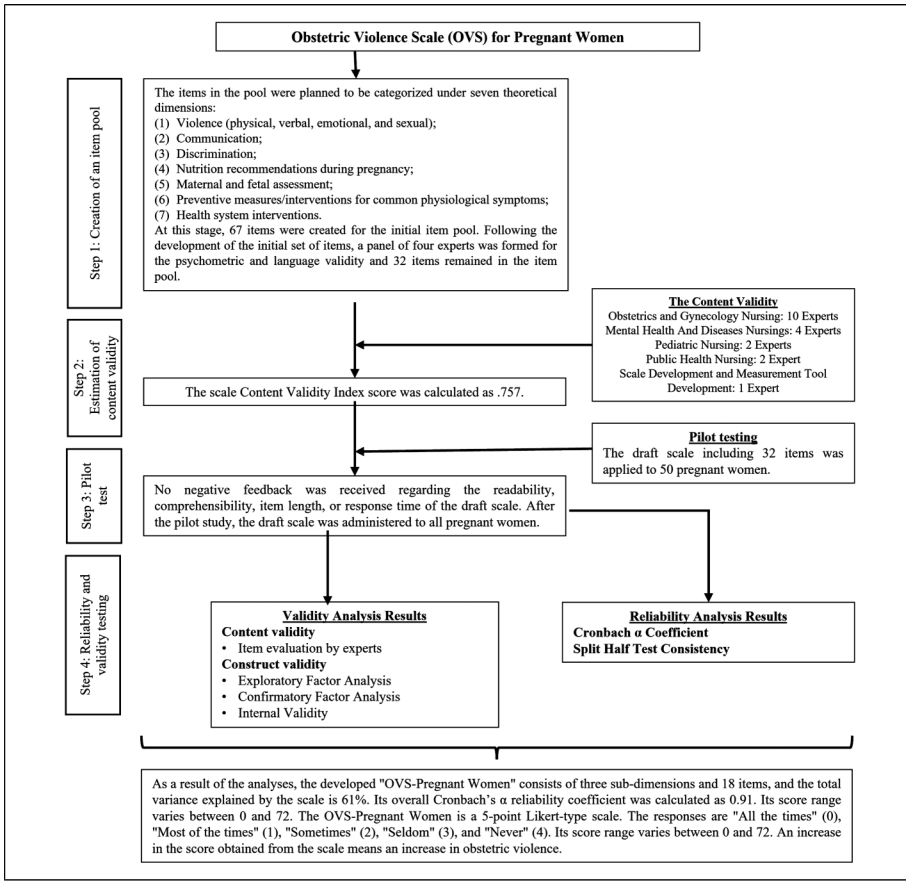

Figure 1. Summary of the Research Method.

Population and Sampling

The study population consisted of all pregnant women who attended the obstetric polyclinics of two hospitals. The participants were pregnant women with a gestational age between 28 and 42 weeks who were attending the hospital for antenatal follow-up. The sample was selected using the simple random sampling method.

The literature contains a number of differing recommendations regarding the calculation of sample sizes in scale development (Carpenter, 2018). The recommended required sample size is at least 10 respondents for each scale item, that is, the ideal respondent–item ratio is 10:1 (Boateng et al., 2018). Accordingly, the targeted sample size for this study was 320 pregnant women (for 32 items), and data collection forms were completed by 403 respondents (approximately 12.6 times the targeted sample size).

The inclusion criteria for participants were as follows: age ≥18 years, literate, gestational age between 28 and 42 weeks, a minimum of four antenatal visits during pregnancy, and the ability to speak, read, and write in Turkish. Individuals with an intellectual disability or mental illness that impeded the ability to provide informed consent, or who provided incomplete responses to the study questions, were excluded from participation.

Stages of Development

Following the methodological frameworks based on the instrument development guidelines by DeVellis and Thorpe (2017), the study consisted of four phases (DeVellis & Thorpe, 2017). The four phases of the study were as follows: (a) creation of an item pool; (b) estimation of content validity; (c) pilot test; and (d) validity and reliability.

Step 1: Creation of an item pool. The initial stage of developing the OVS for Pregnant Women (OVS-Pregnant Women) involved conducting a comprehensive literature review and interviews.

Literature Review. A comprehensive literature review was conducted to investigate the concept of OV during pregnancy (Aslantekin Özçoban et al., 2020; Mena-Tudela, Iglesias-Casás et al., 2020b; Ogunlaja et al., 2017; Perera et al., 2018; Solnes Miltenburg et al., 2018; Vacaflor, 2016). The relevant articles were identified through an electronic search of the MEDLINE/PubMed, Scopus, Web of Science, and Google Scholar databases. The keywords "pregnancy," "obstetric violence," and "violence and pregnancy" were used either alone or in combination. Furthermore, the following guidelines were considered: the WHO's guidelines on antenatal care for a positive pregnancy experience (World Health Organization, 2016b), the National Institute for Health and Care Excellence (NICE) Antenatal Care Guidelines (National Institute of Health and Clinical Excellence, 2021), and the T.C. Ministry of Health's antenatal care management guidelines (Ministry of Health, Republic of Türkiye, 2018) were consulted.

Interviews With Pregnant Women. In order to ascertain the perspectives and experiences of pregnant women with regard to antenatal care, a series of interviews was conducted. The data collected from these interviews were subjected to content analysis. The statements derived from the interviews that contributed to the scale were included in the item pool.

Theoretical Dimensions and Item Categorization. In accordance with the main factors identified through the literature review and interviews, the items in the pool were categorized under seven theoretical dimensions. The categories identified were as follows: "violence (physical, verbal, emotional, and sexual)," " communication," "discrimination," "nutrition recommendations during pregnancy," "maternal and fetal assessment," "preventive measures/interventions for common physiological symptoms," and "health system interventions."

Development of the Draft Scale. The statements related to violence were structured according to the scale item writing rules, using the determined dimensions, resulting in a draft scale consisting of 67 items. A panel of four experts was constituted to evaluate the psychometric and linguistic validity of the items. Following an evaluation of the items, some were removed from the question pool on the grounds of linguistic and psychometric inadequacy, while others were deemed to have similar meanings. As a result, the item pool was reduced to 32 items.

Likert Scale and Response Categories. For the 32 items, the research team decided to use a Likert scale with five response categories: "*all the times*" (0), "*most of the times*" (1), "*some times*" (2), "*seldom*" (3), and "*never*" (4). The participants were required to select the response category that most closely corresponded to their experiences.

Step 2: Estimation of content validity. In order to assess the content validity of the 32-item OVS-Pregnant Women, the Lawshe (1975) technique was utilized. The questionnaire was sent to 25 experts via email, requesting their evaluation on several aspects: (a) The extent to which the questionnaire items reflected necessity, (b) The clarity and specificity of the scale items, (c) The appropriateness of the items to the cultural context, (d) The relevance of the items to the standards of OV against pregnant women. The evaluation documents were returned by 17 experts (response rate: 68%) within a 2-week period. The group of 19 experts comprised 10 individuals with expertise in the field of obstetrics and gynecology nursing, two with expertise in public health nursing, four with expertise in mental health and diseases nursing, one with expertise in scale development and measurement tool development, and two with expertise in child health and diseases nursing. The experts were instructed to score each item on a scale of 1 to 3, with 1 representing "*essential*," 2 representing "*useful but not essential*," and 3 representing "*not necessary*" (Lawshe, 1975). The content validity of the scale was evaluated using the content validity ratio (CVR) method. The CVR was calculated based on the responses of the experts regarding the necessity of each item (Ne). The formula used for calculating CVR was $CVR = (Ne - N/2)/(N/2)$, where N represents the total number of experts. According to Lawshe's table, for a panel of 17 experts, the minimum required CVR for each item was determined to be 0.529 (Ayre & Scally, 2014).

Step 3: Pilot test. In order to evaluate the readability, comprehensibility, and response time of the questionnaire items, a pilot study was conducted between March and April 2022, involving 50 pregnant women (Carpenter, 2018). The researcher explained the aims of the pilot study to the pregnant women and encouraged them to participate. The participants were recruited from a sample of volunteer pregnant women admitted to the hospital, who met the criteria for inclusion in the study. Each participant completed the draft forms independently. Following the pilot test, no negative feedback was received from the pregnant women after the pilot test. The results of the pilot study indicated that the draft scale developed for the study was fit for purpose and did not require any modifications. The pregnant women who participated in the pilot study were not included in the final sample used for the main study.

Step 4: Validity and reliability testing. A preliminary analysis was conducted to evaluate the suitability of the data. The criteria for determining the factor structure of the scale were set at a proportion of total variance explained exceeding 40% and eigenvalues exceeding 1 (Boateng et al., 2018; Carpenter, 2018). In order to facilitate the interpretation of the results, a minimum acceptable threshold of 0.40 was set for the factor loading. The construct validity and internal validity of the scale were subjected to evaluation. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted to examine the construct validity of the OVS-Pregnant Women. EFA was employed to examine the item–factor relationships within the scale. The direct oblimin technique was the preferred method for factor rotation. Prior to conducting the EFA, researchers evaluated the appropriateness of the sample for factor analysis by conducting two tests: the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's Test of Sphericity. The adequacy of a sample for factor analysis is predicated upon the KMO value, which is expected to be at least 0.60, and the statistical significance of Bartlett's Sphericity test (Carpenter, 2018). In order to determine the appropriate number of factors in the factor analysis, eigenvalues and scree plots were employed (Carpenter, 2018; DeVellis & Thorpe, 2017). Factor loadings equal to or higher than 0.50 were accepted as appropriate (Boateng et al., 2018). The CFA was employed to assess the extent to which the items and subscales corresponded to the original structure of the scale. The model fit was evaluated using a number of fit indices. The internal validity of the scale was evaluated through the use of an independent groups *t*-test. For this purpose, a comparison was conducted between the two groups with a 27% difference between the lower and upper groups.

The Cronbach's alpha coefficient and split-half method were utilized for the purpose of evaluating the reliability of both the subdimensions and the entire instrument. In the literature, a Cronbach's alpha coefficient of .70 or higher is generally considered acceptable (Boateng et al., 2018; Carpenter, 2018; DeVellis & Thorpe, 2017).

Quality Appraisal

This methodological study was conducted in accordance with the standards for the development of measurement and the Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) guidelines (Mokkink et al., 2019).

Data Collection

The study was conducted between May and November 2022 at the obstetric polyclinics of two hospitals in northern Turkey. The data for the sample population in this study were collected through face-to-face interactions with pregnant women who met the inclusion criteria. The data collection process was conducted in a hospital setting, where participants were requested to complete the data collection tools. Each participant completed the forms individually and independently, with an estimated completion time of 8–10 min.

Data Collection Tools

In this study, two survey forms were administered to the participants concurrently. The first form was a personal information form, the purpose of which was to gather data pertaining to the sociodemographic and obstetric characteristics of pregnant women. The authors designed this form, consisting of eight questions, which included items such as age, level of income, place of residence (urban/rural), and number of pregnancies. The second form was a trial version of the OVS-Pregnant Women, which consisted of 32 items. This form was designed specifically for the purposes of this study, with the objective of assessing the experiences of OV during pregnancy. The participants were required to evaluate each item using a 5-point Likert scale: "*all the times*" (0), "*most of the times*" (1), "*sometimes*" (2), "seldom" (3), or "never" (4).

Statistical Analysis

The data analysis was conducted using the IBM SPSS Statistics version 25.0 and AMOS version 24.0 statistical software programs. Descriptive statistics were presented for sociodemographic and obstetric data as frequencies, percentages, and mean values. The level of significance was accepted as $p < .05$.

Ethical Considerations

In this study, ethical considerations were accorded a high level of priority. The research obtained ethical approval from the Scientific Research and Publication Ethics Committee of the State University, ensuring that the study adhered to ethical guidelines and principles. The approval was dated April 5, 2022 and numbered E-18457941-050.99-45560. In addition, institutional permissions were obtained prior to the commencement of the study, thus further ensuring the ethical conduct of the research.

The researchers provided a clear and comprehensive explanation of the study's purpose to the participants, both in written and verbal form. Each participant provided informed consent, thereby indicating their voluntary agreement to take part in the study. The researchers emphasized the principles of anonymity and confidentiality, assuring the participants that their personal information would be safeguarded and treated with the utmost confidentiality. The study procedures were conducted in accordance with the ethical principles outlined in the Declaration of Helsinki.

Results

Sociodemographic and Obstetric Characteristics

The mean age of the pregnant women was 29.78 ± 5.59 years (min: 18 and max: 45). The majority of women (57.3%) were multipara. The sociodemographic and obstetric characteristics of the participants are shown in Table 1.

Table 1. Sociodemographic and Obstetric Characteristics.

Characteristics		
Age ($M \pm SD$ in years) (min–max)	29.78 ± 5.59 (18–45)	
	N	%
Education of the women		
Primary education	76	18.9
High school	148	36.7
Associate degree	63	15.6
University	116	28.8
Employment status		
Employed	153	38.0
Unemployed	250	62.0
Income level[a]		
Minimum wage and below	188	46.7
Above minimum wage	215	53.3
Place of living		
Rural areas	121	30.0
Urban areas	282	70.0
Health insurance		
Yes	371	92.1
No	32	7.9
Parity		
Primipara	172	42.7
Multipara	231	57.3

[a]The minimum wage level for 2022 is nearly 5,500 Turkish Liras.

Validity

Content validity. Each item in the draft scale was evaluated by experts, and since the CVR value for each item was above 0.529, no items were removed from the scale. The validity ratios ranged from 0.647 to 1.00 for the 32 items, indicating that they were considered valid by the experts. The content validity index score for the scale was found to be 0.757, indicating that the remaining items in the scale had significant content validity.

Construct validity. The construct validity of the scale was assessed through the use of both EFA and CFA analyses.

Item analysis or reduction. Prior to the EFA, the correlations of each of the 32 items with the general items were examined in order to increase the reliability and to examine the contribution of each item. The correlation coefficients of 11 items were below 0.40 (Table 2). Therefore, these items were deleted as they had low discriminative power. The correlation coefficients of the remaining 21 items ranged from 0.42 to 0.67 (Table 2).

Table 2. Values of Item-Total Item Test Correlation.

Item number	Item correlation	Item number	Item correlation	Item number	Item correlation	Item number	Item correlation
Item 1	.554	[a]Item 9	−.011	Item 17	.653	Item 25	.582
Item 2	.421	[a]Item 10	.037	Item 18	.669	Item 26	.569
Item 3	.482	[a]Item 11	.179	Item 19	.661	Item 27	.588
Item 4	.436	[a]Item 12	.239	Item 20	.665	Item 28	.470
Item 5	.516	[a]Item 13	.065	Item 21	.569	Item 29	.434
[a]Item 6	−.169	[a]Item 14	.165	Item 22	.586	[a]Item 30	.224
Item 7	.521	[a]Item 15	.085	Item 23	.600	[a]Item 31	.290
Item 8	.426	Item 16	.507	Item 24	.597	[a]Item 32	.125

[a]Items with a total correlation below .40 were removed from the study.

Explanatory factor analysis. Prior to conducting the EFA to determine construct validity, the KMO was calculated for sample adequacy, and Bartlett's test of sphericity was performed to determine the suitability of the data for factor analysis. The KMO coefficient was 0.90, and the results of Bartlett's sphericity test were statistically significant ($\chi^2 = 2773.00$, $p < .001$). The EFA was conducted to assess the construct validity of the scale. For factor analysis, the direct oblimin rotation technique was used. As a result of the factor analysis, three items with factor loadings below 0.50 were excluded from the analysis. The remaining 18 items demonstrate strong factor loadings, ranging from 0.59 to 0.83. The analysis showed that three factors emerged from the data, with eigenvalues greater than 1 for the remaining 18 items. According to the EFA results, the first factor explained 41.6% of the total variance, the second factor explained 10.2% of the total variance, and the third factor explained 9.2% of the total variance. In total, the three-factor structure accounted for 61% of the total variance of the scale (Table 3).

Confirmatory factor analysis. The CFA results were consistent with the EFA results and are shown in Figure 2. The model fit indices for the three subdimensions model obtained from the CFA were as follows: Chi-square and degrees of freedom ratio (χ^2/df) = 3.08, Adjustment Goodness of Fit Index = 0.88, Comparative Fit Index = 0.91, Goodness of Fit Index = 0.86, Root Mean Square Error of Approximation = 0.08, Normed Fit Index = 0.91. In addition, when the correction indices of the model were examined, it was observed that the covariance of items 19 and 20 was high, and the error terms of these items were combined. As a result of the CFA, the factor loading values of the overall scale ranged from 0.51 to 0.79.

Internal validity. The internal validity of the scale was determined by a 27% comparison between the lower and upper groups (Table 4). For this purpose, a "*t*-test on independent groups" was used to assess the 27% difference in the comparison between the lower and upper groups. When examining the results of internal validity, it was

Table 3. Factor Items and Item Factor Load Values.

No	Items	Factor 1	Factor 2	Factor 3
I27	I was informed about family planning methods that could be used in the postpartum period.	.825		
I26	I was informed about sexual life during pregnancy.	.807		
I25	I was informed about the importance of breastfeeding or breast milk.	.802		
I20	I was informed about physiological symptoms (nausea, vomiting, heartburn, back pain, leg cramps, back and pelvic pain, constipation, varicose veins, edema, etc.).	.663		
I17	I was informed about childbirth (methods, location, timing, pain management techniques, preparation of the delivery bag, etc.).	.637		
I19	I was informed about risky situations during pregnancy (vaginal bleeding, high blood pressure, fever, etc.).	.589		
I18	I was informed about healthy lifestyle behaviors during pregnancy (nutrition, healthy weight gain, sleep, rest, exercise, etc.).	.527		
I3	My physical examination (blood pressure, height, and weight, etc.) was done appropriately.		.732	
I2	I was asked about my personal information, illnesses, alcohol/smoking, and medication history.		.714	
I4	My laboratory tests (full blood count testing/urine culture, etc.) were conducted.		.676	
I1	Effective and respectful communication (eye contact, active listening, being explanatory, kind, tolerant, etc.) was established with me.		.604	
I5	The allocated time for examinations (average 20–30 min) was sufficient.		.565	
I16	My concerns and fears regarding pregnancy and childbirth were carefully listened.		.561	
I7	I was informed about all procedures conducted (double/triple marker test, blood tests, nonstress test, etc.).		.521	
I22	I was informed about rational medication use (iron, vitamin D, folic acid, etc.).			.828
I23	I was informed about recommended tests (double/triple marker test, glucose tolerance test, etc.).			.799
I24	I was informed about risky situations concerning my baby (reduced fetal movements, not feeling movements, etc.).			.768
I21	I was informed about tetanus vaccination or other vaccines.			.641
Variance explained by subscale (%)		41.6	10.2	9.2
Variance explained (%)		61		

found that the difference between the mean scores of the OVS developed for pregnant women belonging to the lower and upper groups was significant for both the scale factors and the overall scale ($p < .001$).

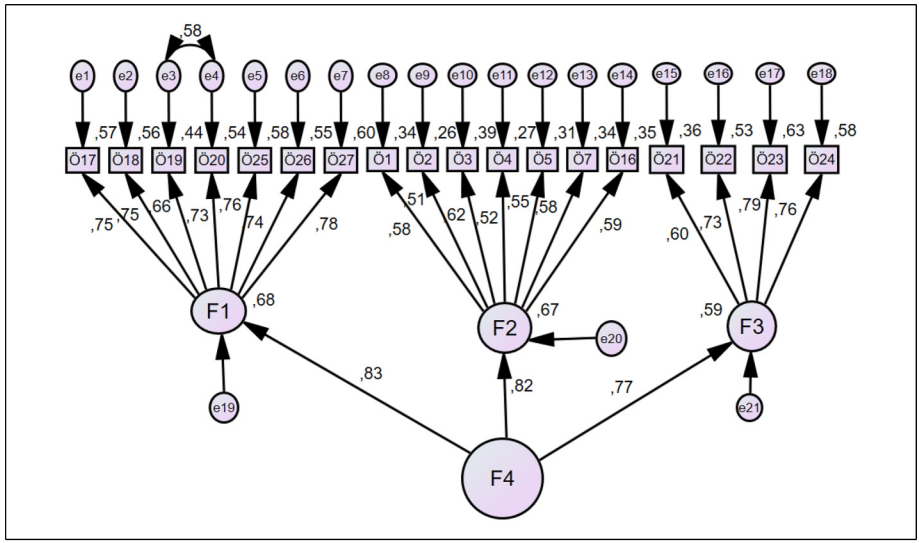

Figure 2. Confirmatory Factor Analysis of the Three-Factor Model.
Note: F1: Factor 1 (Supportive Care and Information Support); F2: Factor 2 (Achieving Professional Standards of Care and Effective Communication); F3: Factor 3 (Health Promotion).

Table 4. Internal Validity Results of the OVS-Pregnant Women.

Factors	Group	Mean	Standard error	T (Lower 27%–upper %27)	*p*
Supportive Care and Information Support	Lower group	7.6	.9	−39.872	<.001
	Upper group	27.6	4.5		
Achieving Professional Standards of Care and Effective Communication	Lower group	7.0	.3	−27.710	<.001
	Upper group	1.4	3.4		
Health Promotion and Encouragement	Lower group	4	0	−17.237	<.001
	Upper group	11	3.7		
OVS-Pregnant Women	Lower group	19.5	1.7	−30.595	<.001
	Upper group	52.7	9.8		

Note. OVS = Obstetric Violence Scale.

Reliability

Cronbach's alpha coefficient. The Cronbach's alpha coefficient for the overall scale was found to be .91. In addition, the first subdimension had a Cronbach's alpha coefficient of .89, the second subdimension had a coefficient of .79, and the third subdimension had a coefficient of .84.

Split-half test consistency. According to the results of the split-half test consistency analysis, the correlation between the groups for Factor 1 was $r = .822$ with $p < .001$. For Factor 2, the correlation between the groups was $r = .694$, and for Factor 3, it was $r = .756$ (with $p < .001$ for both). Furthermore, the split-half test also showed a statistically significant correlation for the overall scale, with a correlation coefficient of $r = .871$ (with $p < .001$).

Discussion

The fifth of the Sustainable Development Goals (SDGs)—"Achieve gender equality and empower all women and girls"—also aims to end all forms of discrimination against all women and girls everywhere, and to ensure reproductive rights and decision-making autonomy (United Nations, 2021). In this context, the use of measurement tools is necessary to assess the extent of OV experienced by women, ensure reliable tracking of progress, and identify specific areas requiring interventions and policies to achieve the SDGs. In examining the measurement tools used to assess OV, it was found that the OVS developed by Reuther measures the level of OV experienced by women during childbirth (Reuther, 2021), while the scale developed by Mena-Tudela et al. evaluates the perceptions of healthcare science students regarding specific practices related to OV (Mena-Tudela, Cervera-Gasch et al., 2020a), and other tools developed measure the level of mistreatment experienced by women during childbirth (Bohren et al., 2018; Dwekat et al., 2021; Paiz et al., 2022). According to our literature search, no specific measurement tool has been identified to assess the OV experienced by women during the pregnancy period. However, OV has become a priority area of research both in Turkey and worldwide (Acar & Şahin, 2021; Perrotte et al., 2020; Shrivastava & Sivakami, 2020). It is therefore significant that the scale developed is considered to be the first measurement tool that specifically assesses the OV experienced by pregnant women during pregnancy.

We have developed a new tool called the OVS-Pregnant Women by creating a meticulous item pool and subjecting it to a psychometric testing process. The OVS-Pregnant Women was designed to assess OV experienced by pregnant women, by health professionals/institutions throughout the pregnancy period. The EFA found that the OVS-Pregnant Women yielded a three-factor structure, and the three factors were confirmed in the CFA. This indicates that the concept of OV for pregnant women is multidimensional, and the tool consists of three subdimensions. The latest version of OVS-Pregnant Women, consisting of three subdimensions and 18 items, demonstrated good internal consistency and structural validity, with a reliability coefficient of 0.91 for the overall scale. These three subdimensions were labeled "Supportive Care and Information Support," "Achieving Professional Standards of Care and Effective Communication," and "Health Promotion" respectively (see Supplemental Material S1).

The subdimension of "Supportive Care and Information Support" (seven items) encompasses women's questions regarding sexual life during pregnancy, physiological

changes, risky situations, healthy lifestyle behaviors, the childbirth process, postpartum family planning methods, and questions related to breastfeeding or lactation. The items in this subdimension are in line with the guidelines recommended by the WHO for a positive pregnancy experience (World Health Organization, 2016b) and the NICE Antenatal Care Guideline (National Institute of Health and Clinical Excellence, 2021). Additionally, it is consistent with the content of the antenatal care guidelines of the Ministry of Health in Turkey (Ministry of Health, Republic of Türkiye, 2018). Access to reliable information is critical to women's experience and well-being during pregnancy and childbirth (Vogels-Broeke et al., 2022). In this context, "Supportive Care and Information Support" during pregnancy can help prevent common complaints, increase awareness of risky situations, establish a secure relationship with the family preparing for childbirth, provide information about potential needs, and help improve pregnancy outcomes.

The subdimension of "Achieving Professional Standards of Care and Effective Communication" (seven items) includes routine elements in preconception care visits (physical examination, medical history, laboratory tests), duration of the examination, and questions related to effective communication. Taking into consideration some of the items in this subdimension, it was named by utilizing Bohren et al.'s typology of mistreatment of women (Theme: Physical examinations and procedures; Bohren et al., 2015). Effective communication was defined as parameters such as establishing eye contact; active listening; being explanatory, gentle, and tolerant; listening to concerns/fears related to pregnancy and childbirth; and providing information about all procedures undertaken. Effective communication is one of the eight standards outlined in WHO's Standards for Improving Quality of Maternal and Newborn Care in Health Facilities. These standards are in line with the Quality Care Framework, and effective communication is recognized as an essential aspect of quality care (World Health Organization, 2016a).

The "Health Promotion" subdimension (four items) encompasses informing pregnant women about medication use (iron, vitamin D, folic acid, etc.), providing information about recommended tests during pregnancy, discussing potential risks related to the baby, and answering questions about recommended vaccinations during pregnancy. In this regard, the items within this subdimension cover some of the positive health practices during pregnancy. Nurses working in the field of women's health should provide guidance to women throughout their pregnancy to promote positive health behaviors. This is because the well-being of pregnant women impacts not only their own health but also the health of their babies and, consequently, the overall health of the community. Furthermore, the items included in this subdimension are in line with the recommendations of the WHO, the NICE Antenatal Care Guidelines, and the Antenatal Care Guidelines of the Ministry of Health of the Republic of Turkey.

In the present study, 11 items (I6, I9, I10, I11, I12, I13, I14, I15, I30, I31, and I32) with item reliability correlations below 0.40 and three items (I8, I28, and I29) with factor loadings below 0.50 were excluded from the analysis (see Supplemental Table S2). The reasons for excluding these items from the analysis can be as

follows: (a) the understanding that women should be under patriarchal authority (in this scenario, doctors, nurses, and other health professionals), (b) lack of knowledge about sexual and reproductive rights, (c) lack of health literacy, (d) failure to recognize and name the violence, (e) framing the practices as natural, justified, and necessary actions for the well-being of the mother and baby, (f) lack of awareness that the violence experienced includes elements of OV, (g) failure to recognize that OV is a violation of human rights, (h) OV being part of an established institutional culture characterized by trivialization, invisibility, and normalization, (i) referring to the behavior of health professionals as "jokes," (j) attributing the occurrence of OV to excessive workload, inadequate staffing, and physical and mental fatigue of the healthcare personnel as a way to "justify" it, (k) women's inability to recognize the presence of psychological, emotional, sexual, or verbal violence as these may not be as visible as indicators of physical violence (bruising, bleeding, etc.). Furthermore, the limited number of studies on OV in Turkey (Aşci & Bal, 2023; Avcı et al., 2023; Çetin et al., 2024) supports the fact that women are not informed about this phenomenon. In this context, we have also presented in the supplemental material the items that were excluded from the analysis in the OVS-Pregnant Women. This is because even though these items are not included in the current version of the OVS, it is important to consider them as potentially independent questions in OVS research as they may be more important in other research.

Limitations and Strengths

This study represents the first instance of introducing an instrument with good psychometric characteristics to evaluate OV among pregnant women. The OVS-Pregnant Women is a three-dimensional scale developed through a comprehensive literature review and use of international and national guidelines. Indeed, this scale serves as a valuable tool for evaluating pregnant women's experiences related to OV.

Additionally, the use of the COSMIN checklist to evaluate the measurement properties of the OVS-Pregnant Women has strengthened this study by determining the methodology to be "sufficient" to "very good" for the properties evaluated. However, this study has some limitations. Firstly, because the data for this study was collected from Turkish-speaking pregnant women in Turkey, the generalizability of the scale to other countries and/or languages may vary. It is crucial for future research to conduct assessments of the validity and reliability of the scale in different cultural and linguistic contexts to ensure its applicability and accuracy in diverse populations. Secondly, the lack of existing measures of concurrent validity prevents the establishment of concurrent validity for OVS-Pregnant Women. This is due to the lack of available valid instruments available at the time of the study. Absolutely, despite the acknowledged limitations, this study offers valuable contributions to the understanding of OV research through the development and examination of OVS-Pregnant Women. The findings from this study may pave the way for future research to improve and extend the use of the scale in different populations and settings. By conducting further validation studies, researchers can strengthen the scale's credibility and explore its potential in addressing OV in various cultural,

geographical, and social contexts. This will undoubtedly advance our knowledge and efforts to tackle OV and improve maternal health globally.

Conclusion

The OVS-Pregnant Women is the first published instrument to assess OV during pregnancy. This study has demonstrated that the OVS-Pregnant Women, consisting of 18 items, is a valid and reliable instrument for measuring pregnant women's experiences of OV. The scale has three dimensions: "Supportive Care and Information Support," "Achieving Professional Standards of Care and Effective Communication," and "Health Promotion and Encouragement." The scores on the scale range from 0 to 72. A higher score on the scale indicates a higher level of experience related to OV. Additionally, this newly developed scale has the potential to be used in future cross-sectional and longitudinal studies to assess OV experienced by pregnant women. In conclusion, the development and validation of the OVS-Pregnant Women will undoubtedly contribute significantly to enhancing our understanding of the issue of OV. By providing a standardized and reliable tool to assess pregnant women's experiences, researchers and health professionals will be better equipped to identify and address OV effectively. This, in turn, can lead to the development of more targeted and appropriate interventions and policies to manage and reduce OV, ultimately improving the overall quality of maternal health care and the well-being of pregnant women.

Implications and Recommendations

This scale can be used as a valid tool to assess whether women have a positive pregnancy experience. The participants in this development and validation study were all Turkish and native Turkish speakers. However, the questionnaire can also be used in other Turkish-speaking settings as well, as the items were primarily written in Turkish. The questionnaire can be used in all regions of Turkey, where people share the same culture, language, ethnic background, and living conditions. Additionally, the English version of the Turkish questionnaire is available in Supplemental Table S2 (unvalidated). Therefore, the questionnaire can be translated into English and other languages through an official translation process and applied to a wider population. Additionally, further research is essential to improve and optimize the measurement of OV during pregnancy in healthcare settings. This includes refining and improving the existing tools, such as the OVS-Pregnant Women, to make them even more reliable and comprehensive in assessing OV experiences. In addition, it is essential to explore ways in which these tools can be seamlessly integrated into routine monitoring and feedback processes in healthcare settings.

Through further research, health professionals can gain valuable insights into the effectiveness and practicality of implementing these measurement tools in real-world clinical settings. This knowledge will enable them to develop strategies for early identification and management of OV, which can lead to improved maternal care, patient satisfaction, and outcomes for pregnant women. Integrating these tools into routine monitoring and feedback processes can also help to create a supportive and responsive

environment that encourages open communication and enables early intervention in cases of OV. Ultimately, such efforts will contribute to a safer and more supportive healthcare environment for pregnant women and have a positive impact on maternal health outcomes. As this scale has already been validated in Turkey, further validation is needed in other countries.

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Data Sharing Statement

If the corresponding author deems it appropriate, the data can be obtained from the corresponding author.

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