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The Birth Satisfaction Scale-Revised Indicator (BBSRI): Hausa Adaptation, Validation, and Reliability Study Among Nigerian Mothers

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Abstract

Introduction: Childbirth is a pivotal life event, with the quality of care during this period significantly impacting a woman's short and long-term physical and emotional well-being, as well as her baby's health. Intrapartum care, provided by midwives and obstetricians plays a crucial role in maternal experiences and satisfaction. In low- and middle-income countries like Nigeria, the quality of intrapartum care has been a concern, associated with high maternal mortality rates. Ensuring maternal satisfaction with delivery services is emphasized by the World Health Organization as a means to reduce maternal mortality. The Birth Satisfaction Scale-Revised Indicator (BSS-RI) is a validated tool to measure birth satisfaction, but its Hausa version's psychometric properties had not been assessed in Nigeria.

Aim: To examine the validity and reliability of the Birth Satisfaction Scale – Revised Indicator (BSS-RI) and to adapt it to Hausa language.

Methods: This cross-sectional study was conducted at Murtala Muhammad Specialist Hospital in Kano, Nigeria, involving postpartum women. The sample size was 422 respondents, selected using a simple random sampling technique. The BSS-RI, comprising 6 items, was translated into Hausa and validated. Data were analyzed using SPSS version 25.

Results: The study revealed that the Hausa version of the BSS-RI had good face and content validity, with a content validity index (CVI) of 1.0, indicating excellent clarity and relevance of items. Construct validity was established through exploratory factor analysis, revealing a 2-factor structure, explaining 51.40% of total variance. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was calculated to be 0.683. Additionally, Bartlett's Test of Sphericity was statistically significant. Convergent validity was demonstrated by a strong, positive correlation between BSSRI scores and satisfaction of women with intrapartum care, which was statistically significant ($r = 0.901$, $p = .005$). Divergent validity was demonstrated by the very weak positive correlation ($r = 0.059$, $p = .725$) between BSS-RI scores and the number of antenatal visits. The internal consistency reliability of the Hausa BSS-RI was high, with a Cronbach's Alpha value of 0.763.

Conclusion: The study established that the Hausa version of the BSS-RI is a valid and reliable tool for measuring birth

satisfaction among postpartum women in Kano, Nigeria. This instrument can contribute to improving maternal care and ultimately reduce maternal mortality in low- and middle-income settings like Nigeria.

Recommendation: The study recommends incorporation of the Hausa BSS-RI into routine maternal care services, as it provides a valuable tool to monitor and enhance the quality of care, promote positive birthing experiences, and contribute to the reduction of maternal mortality rates in Nigeria.

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Introduction

Childbirth is a life-changing event, and the care that a woman receives during this period has the potential to affect her, both physically and emotionally, in the short and longer term and can affect the health of her baby. Good communication, support and compassion from staff, and having her wishes respected, can help her feel in control of what is happening and contribute to making birth a positive experience for the woman and her birth companion(s) (National Institute for Health and Care Excellence, 2022).

Maternal experiences and satisfaction with maternity service is often associated with the quality of intrapartum care, as the nature of the support given during labour and childbirth is reflective of a positive birth experience (Kifle et al., 2017). Intrapartum nursing care is the care given by nurses and midwives for labouring mother during labour and delivery (Demis et al., 2020). Even though the primary target of the United Nations' Sustainable Development Goal (SDG 3) is to reduce the global maternal mortality rate to less than 70 per 100,000 live births (World Health Organization, 2021), the quality of intrapartum care in most low- and middle-income countries was chronically poor, and this had been identified as one of the precursors to the high maternal mortality rate in low- and middle-income countries (Demis et al., 2020).

The World Health Organization (WHO) emphasizes ensuring patient satisfaction as a means of secondary prevention of maternal mortality, since satisfied women are more likely to adhere to health providers' recommendations and utilization (World Health Organization, 2021). Maternal satisfaction with the delivery service may have immediate and remote effects on health of the mothers. Some identified negative impacts were reflected in a number of health outcomes, including maternal and infant mortality rate, perinatal infections, perceived health status, and hygiene compliance (World Health Organization, 2021). Feelings of satisfaction are essential to maintaining maternal health, as well as providing continuous

quality care of maternal and child health (Sayed et al., 2018). In fact, continuity of maternal and child care is related to the levels of satisfaction of mother and family members with health providers and health facilities (Sayed et al., 2018).

The Birth Satisfaction Scale (BSS) was developed by Martin & Fleming (2011), as a self-report questionnaire to assess women's experiences of birth. The initial BSS was developed in English Language and comprised of 30-items using thematic review of the research literature and evidence-based reports of women's birth satisfaction (Martin & Fleming, 2011). This was then followed by the BSS-R which consisted of 10-item assessing three domains: Quality of Care, Women's Attributes and Stress Experienced (Martin & Martin, 2014). The Birth Satisfaction Scale-Revised Indicator (BSS-RI) was developed by simplifying the BSS-R and reducing the number of items in order to function as an indicator. The BSS-RI consists of 6 items divided into two domains: Stress of Childbearing (4 Items), and Quality of Care (2 Items); it was found to have outstanding psychometric properties in the UK, representing an easily administered measure while providing information which is psychologically plausible (Martin et al., 2017; Omani-Samani et al., 2021).

To the best of our knowledge, no studies have been conducted in Nigeria to assess psychometrics properties of the Hausa version of the BSS-RI. There are also limited studies in Nigeria that used a standardized scale to measure women's satisfaction with intrapartum care, making it difficult to compare Nigerian findings with results from other countries that used the same tool. Therefore, this study was conducted to evaluate the validity and reliability of BSS-RI (Hausa version) among women who delivered at Murtala Muhammad Specialist Hospital, Kano, Nigeria.

Materials and Methods

Study Design

The study was a descriptive, analytical cross-sectional study involving women at labour and postnatal wards of Murtala Muhammad Specialist Hospital.

Study Setting

This study was conducted at Murtala Muhammad Specialist Hospital (MMSH), Kano. The hospital is located in the center of Kano Municipal Local Government which is a densely populated area of the state, with longitude and latitude of 11.9971° N and 8.5203° E respectively. MMSH was chosen as the setting for this study because it serves not only patients from Kano but also neighboring states such as Katsina state, Jigawa state, Zamfara state e.t.c. and countries e.g. Niger republic, Benin and Mali. MMSH serves a much greater population due to being one the most affordable hospital which provides a wide range of services. MMSH is also the busiest maternity center in Kano with high turnover of mothers giving birth, it also has the patient's profile that is characteristic of most public hospitals in Nigeria. This hospital has an average of 1250 births per month and 15,000 deliveries annually.

Target Population

The target population of the study were women at labour and postnatal wards of Murtala Muhammad Specialist Hospital.

Inclusion Criteria

- Women who delivered at MMSH by spontaneous vaginal delivery successfully and are in their immediate postpartum period (1-7 days) during the study period.

Exclusion criteria

- Women who experienced birth complications requiring admission to a special care.
- Women who delivered outside the hospital and only reported to the hospital with complications.
- Women who did not sign the consent form.
- Women who delivered in the selected hospital by vacuum delivery, instrumental deliveries and cesarean section.
- Women with known complications, including preterm labor, antepartum hemorrhage, severe anemia, operative vaginal delivery (forceps and vacuum).

Sample Size and Sampling Technique

The sample size for the quantitative survey was determined using the Fisher's Formula (Fisher, 1998). A prevalence rate of 51% (0.51) will be used as obtained in previous study conducted in North-East, Ethiopia by Demis et al., (2020). Therefore a sample size of 384 respondents was obtained. The sample size was inflated by 10% to account for possible non-response and errors in data collection. The final sample size was 422 respondents.

A simple random sampling technique was used to recruit consenting women at the labour and postnatal wards. A random number generator app was used to randomly select the required number of respondents. However, if the selected respondent is not eligible, she was excluded and the next eligible respondent was recruited. This process was done on daily basis until the required sample size was obtained.

Study Instrument

The BSS-RI is a short self-report instrument designed to measure satisfaction of the childbearing women's experiences of labour and its outcomes. It consists of 6 items divided into two domains: Stress of Childbearing (4 Items), and Quality of Care (2 Items) (C. R. Martin et al., 2017; Omani-Samani et al., 2021).

Translation of BSS-RI to Hausa

The customary "forward-backward" translation procedure was used to translate the BSS-RI from English to Hausa language. The questionnaire was translated to Hausa from English by two native Hausa researchers, who were fluent in oral and written English. The two forward translations were paralleled and merged into one collective version by the researchers. The merged version was then back-translated by a language expert who was fluent in both English and

Hausa. The expert was blinded to the original English version of the BSS-RI. The original version and the back-translated version were then compared and minor discrepancies were corrected. A pilot study was conducted using 42 women at postnatal ward of Nuhu Bamalli Maternity Hospital, Kano. Further corrections were subsequently completed, and the final version was made available for this research.

Table 1. Items of the BSS-RI in English and Hausa (BSSRI)

	English	Hausa
BSS-RI 1	I was not distressed at all during labour[a]	Ban samu ko wace irin damuwa ba a lokacin naƙuda[a]
BSS-RI 2	I felt very anxious during my labour and birth[b]	Na ji matukar damuwa a lokacin naƙuda da haihuwata[b]
BSS-RI 3	I felt well supported by staff during my labour and birth [a]	Ma'aikatan lafiya sun karfafa min qwiwa a lokacin naƙuda da haihuwata [a]
BSS-RI 4	I found giving birth a distressing experience[b]	Haihuwa ta zo min da matukar damuwa [b]
BSS-RI 5	I felt out of control during my birth experience[b]	Na samu kaina a rikice a lokacin haihuwa [b]
BSS-RI 6	The staff communicated well with me during labour [a]	Ma'aikatan lafiya sun yi min gamsashen bayani a lokacin nakuda[a]

Method of Data Collection

After brief explanation of the study objectives, the participants were assured about the confidentiality and anonymity of their responses. Written consent was obtained to participate in the study. Data collection was carried out in the labour and postnatal wards and confidentiality was kept during the whole process of the study. Five diploma and 2 Bachelors of Science in Nursing (BNSc) degree holder midwives were involved in data collection and supervision respectively. Training for research assistants and supervisors on the data collection procedure and ethical consideration of the study was provided for three days.

On each data collection day, the collected data were reviewed and checked for mistakes, legibility of handwriting, completeness, and consistency, and any mistake or ambiguity were cleared by principal investigator and supervisors; any problems faced in the time of data collection were discussed, and immediate solution was taken. The questionnaire was pretested on 10% of sample size at Nuhu Bamalli Maternity Hospital before the actual data collection to see the accuracy of responses, language clarity, and appropriateness of the tools. The necessary amendments were done based on the findings of the pretest. The amended tools were used for actual data collection at the selected health facilities.

Data Analysis

The data collected was analyzed using the Statistical Package for the Social Sciences (SPSS) version 25 (International Business Machines Corporation (IBM), 2020). Descriptive statistics such as simple frequencies, measures of central tendency, and measures of variability was used to describe the characteristics of respondents. The findings were presented using frequencies, summary measures, tables, and figures. The BSS-RI has a 3-point scoring system with higher scores representing greater birth satisfaction (range 0–2). The items in the BSS-RI were further split into 'a-items'

and ‘b-items’ with a separate scoring system for each (‘a’ items- “agree”=2, “agree to some degree”=1, “disagree”=0; ‘b’ items- “agree”=0, “agree to some degree”=1, “disagree”=2). Items were scored on a 3-point Likert scale, with three of the items reverse-coded (item BSS-RI 2, BSS-RI 4, and BSS-RI 5). Total scores and subscales scores can range as follows: BSS-RI: 0-12, Stress of Childbearing: 0- 8, and Quality of Care: 0-4, with higher scores indicating greater levels of birth satisfaction (Omani-Samani et al., 2021). A score of 9-12 on the BSSRI was regarded as satisfied, 5-8 is regarded as neutral and 0-4 is considered as dissatisfied.

Convergent validity was determined by correlating BSS-RI scale scores with a single overall question asking women how satisfied they were with their maternity care during labour and birth. This question was scored on a 5-point scale with anchor points ranging from very satisfied to very dissatisfied. A Pearson product-moment correlation was run to determine the relationship between BSSRI scores and satisfaction of women with intrapartum care. Divergent validity was determined by correlating BSS-RI scale scores with the number of antenatal visits. A Pearson product-moment correlation was used to determine the relationship between BSSRI scores and number of ANC visits. Content validity was computed using content validity index (CVI). To obtain content validity index for relevancy and clarity of each item (I-CVIs), the number of those judging the item as relevant or clear (rating 3 or 4) was divided by the number of content experts. Internal consistency reliability test was used to compute the Cronbach’s alpha value of the instrument. A Cronbach’s alpha value of >.7000 is considered as significant.

Ethical Consideration

Ethical approval with reference number SHREC/2022/3255 was obtained from the Health Research Ethics Committee (HREC), Ministry of Health, Kano State. Informed consent was obtained from the respondents in order to gain voluntary participation. Confidentiality was guaranteed by storing data in a safe place and only the researcher has access to the data.

The objectives, methodology, purpose of the study, and the benefits and risks of the study were explained to all study participants. Before data collection, participants were also informed of their right to voluntarily participate in the study. Verbal and written consent were sought and documented before conducting any interview. To ensure the privacy of study participants, respondents were interviewed in a conducive environment and confidentiality of the data was guaranteed by preserving the anonymity of the study participants. Individual personal identifiers e.g. name were not collected to ensure the anonymity of data and the researcher kept the information obtained from the research participant in private. Identifying information (names and addresses) was not included in the data collection instrument.

Results

Socio-demographic Characteristics

Table 4.1.1 revealed that the mean for age of respondents is 27.41 and the standard deviation is ±7.196. The table further

showed that all (100%) of the respondents are married. More than one-third (34.8%) of the respondents have had 1 delivery, less than one -sixth (12.8%) have had 2 deliveries, about one-tenth (9.7%) have had 3 deliveries, less than one -sixth (12.6%) have had 4 deliveries and about one-third (30.1%) have had 5 or more deliveries. The table also revealed that almost half (46.7%) of the respondents have attained secondary education, more than a quarter (18.0%) of the respondents have tertiary school education, less than less than one -sixth (13.5%) have primary certificate and less than a quarter (21.8%) have informal education.

The Table further revealed that almost half (45.3%) of the respondents are unemployed, few (5.7%) are civil servants, less than a quarter (22.3%) are involved in business or trade and more than a quarter (26.8%) are artisans. Majority (72.3%) of the respondents are Hausa, less than a quarter (22.5%) are Fulani, very few (1.9%) are Yoruba and very few (3.3%) are from other tribes. An overwhelming majority (98.6%) of the respondents are Muslims, while a very few (1.4%) are of the Christian faith.

Table 2. Distribution of respondents by Bio-demographic data (N=422)

Variable	Frequency(n)	Percentage (%)
Age		
Mean ± Standard deviation **= 27.41 ± 7.196**		
Marital Status		
Single	0	0
Married	422	100
Divorced	0	0
Parity		
1	147	34.8
2	54	12.8
3	41	9.7
4	53	12.6
5 and above	127	30.1
Mean ± Standard deviation **= 3.67 ± 2.957**		
Educational qualification		
Informal	92	21.8
Primary Certificate	57	13.5
Secondary Certificate	197	46.7
Tertiary	76	18.0
Occupation		
Unemployed	191	45.3
Civil Servant	24	5.7
Business/Trade	94	22.3
Artisan	113	26.8
Agriculture	0	0
Culture		
Hausa	305	72.3
Fulani	95	22.5
Igbo	0	0
Yoruba	8	1.9
Others	14	3.3
Religion		
Islam	416	98.6
Christianity	6	1.4
Others	0	0

Findings related to validity of the BSS-RI (Hausa Version)

Face and Content Validity

Face and content validity of the instrument was evaluated by submitting the questionnaire and interview guide to three

health workers from the Obstetrics & Gynaecology department of AKTH and two lecturers from Department of Nursing Sciences, Bayero University, Kano, in order to give their opinions and suggestions about the content of the questionnaire. A face validity of 100% was obtained. Content validity was computed using content validity index (CVI). To obtain content validity index for relevancy and clarity of each item (I-CVIs), the number of those judging the item as relevant or clear (rating 3 or 4) was divided by the number of content experts.

Therefore, I-CVI was computed as 1.0 which is above the recommended value of 0.78 (Shi et al., 2012), which deemed the questionnaire valid in terms of content.

Construct Validity

The construct validity of the Birth Satisfaction Scale was evaluated using exploratory factor analysis (EFA). The analysis involved assessing the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity to determine the suitability of the data for factor analysis. Factor structure analysis was performed using the Principal Components Analysis extraction method, followed by correlated (Direct Oblimin) rotation.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was calculated to be 0.683. This value indicates that the dataset is moderately suitable for factor analysis, as it exceeds the recommended threshold of 0.6. Additionally, Bartlett's Test of Sphericity was statistically significant (Approx. Chi-Square = 238.870, df = 15, $p < 0.001$), suggesting that the variables in the dataset are suitable for factor analysis.

The factor structure analysis using Principal Components Analysis extraction method and correlated (Direct Oblimin) rotation revealed a 2-factor loading. Component 1 explained 33.21% of the total variance, while the second component explained 18.17% of the total variance. The decision to retain these factors was based on an Eigenvalue of 1 and above, in line with standard practice.

The results of the EFA suggest that the Birth Satisfaction Scale has a 2-factor structure, with the identified factors explaining a substantial portion of the total variance. Component 1 and Component 2 account for a cumulative variance of approximately 51.403%, indicating a reasonable representation of the underlying construct.

Based on the results of the exploratory factor analysis, the Birth Satisfaction Scale demonstrates construct validity, as evidenced by the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The identified 2-factor structure explains a substantial portion of the total variance, further supporting the instrument's validity in measuring birth satisfaction.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.683
Bartlett's Test of Sphericity	Approx. Chi-Square	238.870
	df	15
	Sig.	.000

Table 4. Total Variance

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	1.993	33.219	33.219	1.993	33.219	33.219	1.958
2	1.091	18.184	51.403	1.091	18.184	51.403	1.222
3	.896	14.929	66.332				
4	.836	13.929	80.260				
5	.653	10.885	91.145				
6	.531	8.855	100.000				

Convergent Validity

Convergent validity was determined by correlating BSS-RI scale scores with a single overall question asking women how satisfied they were with their maternity care during labour and birth. This question was scored on a 5-point scale with anchor points ranging from very satisfied to very dissatisfied. A Pearson product-moment correlation was run to determine the relationship between BSSRI scores and satisfaction of women with intrapartum care. There was a strong, positive correlation between BSSRI scores and satisfaction of women with intrapartum care, which was statistically significant (r = 0.901, p =.005).

Divergent Validity

Divergent or discriminant validity was determined by correlating BSS-RI scale scores with the number of antenatal visits. A Pearson product-moment correlation was used to determine the relationship between BSSRI scores and number of ANC visits. There was a very weak positive correlation between BSSRI scores and number of ANC visits (r = 0.059, p =.005).

Table 5. Pearson Product Moment Correlation Test for Convergent Validity

Convergent Validity			
		Satisfaction	BSSRI
Intrapartum care was satisfactory	Pearson Correlation	1	.901
	Sig. (2-tailed)		.593
	N	38	38
BSSRI Scores	Pearson Correlation	.901	1
	Sig. (2-tailed)	.593	
	N	38	38

Table 6. Pearson Product Moment Correlation Test

Divergent Validity			
		BSSRI scores	Number of ANC visits
BSSRI Scores	Pearson Correlation	1	.059
	Sig. (2-tailed)		.725
	N	38	38
Number of ANC visits	Pearson Correlation	.059	1
	Sig. (2-tailed)	.725	
	N	38	38

Findings related to Reliability of the BSS-RI (Hausa Version)

The Hausa- BSS-RI showed a high internal consistency with Cronbach's Alpha value of 0.763, which is above the minimum recommended value 0.700. This indicates that the instrument used in this study is deemed reliable and acceptable.

Table 7. Cronbach's Alpha Internal Consistency Reliability Test

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.763	.813	55

Descriptive Statistics of BSS-RI (Hausa Version)

Table 8. Descriptive statistics for BSS-RI (Hausa Version)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
BSSRI-1	422	0	2	1.63	.698
BSSRI-2	422	0	2	1.45	.784
BSSRI-3	422	0	2	1.77	.455
BSSRI-4	422	0	2	1.51	.722
BSSRI-5	422	0	2	1.84	.491
BSSRI-6	422	0	2	1.69	.574
Total	422			9.89	

Table 6 shows the descriptive statistics of the BSS-RI and its domains. The item means ranged from 1.45 to 1.84. The highest mean score on BSS-RI items was obtained for item 5. The sum of means is 9.89, which indicates an overall high level of satisfaction with intrapartum care.

Discussion

The aim of the study was to examine the validity and reliability of the Birth Satisfaction Scale – Revised Indicator (BSS-RI) and to adapt it to Hausa language. The findings of the study revealed that the Hausa version of the BSS-RI had good face and content validity, with a content validity index (CVI) of 1.0, indicating excellent clarity and relevance of items. This finding was in line with a similar study in Turkey, which revealed that content validity assessment scores of ten experts were evaluated by Kendall W analysis, and W value was found to be 0.12 points without any difference among experts (Cetin, 2015).

Construct validity was established through exploratory factor analysis, revealing a 2-factor structure, explaining 51.40% of total variance, KMO was calculated to be 0.683 and Bartlett's Test of Sphericity was statistically significant (Approx. Chi-Square = 238.870, df = 15, $p < 0.001$). This findings were in tandem with a similar study in Iran, which demonstrated a two-factor structure corresponding to the Stress of Childbearing and Quality of Care domains of the structure (Omani-Samani et al., 2021). Similarly, another study in Turkey revealed KMO value was over 0.50, and Barlett's test was statistically significant at a level of p=0.05, items of the scale were found to be eligible, and adequate for factor analysis (KMO=0.65, p=0.00). As an outcome of factor analysis, a four- factor structure which explains 37.61% of total variance and having an Eigen value above 1.000 was revealed (Cetin, 2015). Additionally, a similar Greek study revealed 7 factors (KMO measure of sampling adequacy=0.856 and Bartlett's test of sphericity=2999.806, df=435, p<0.0005) (Vivilaki et al., 2017). The findings were further affirmed by a study conducted in Nigeria, validating the Igbo version of BSS, which showed showed that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) of 0.789, Approximate Chi-Square value of 696.45 and Bartlett's Test of Sphericity was statistically significant at a level of p=0.001 (Anikwe et al., 2022).

The scale demonstrated convergent validity, showing a strong positive correlation ($r = 0.901$, $p = .005$) between BSS-RI scores and satisfaction with intrapartum care. Divergent validity was demonstrated by the very weak positive correlation ($r = 0.059$, $p = .725$) between BSS-RI scores and the number of antenatal visits. This is similar with findings of the study conducted in Iran which revealed that correlation analysis showed that mother's age was not related to BSS-RI total score (r=0.010, p=0.838) (Omani-Samani et al., 2021).

The internal consistency reliability of the Hausa BSS-RI was high, with a Cronbach's Alpha value of 0.763. This is consistent with the study conducted in Greece which showed high overall internal consistency (Cronbach's alpha value: 0.876) (Vivilaki et al., 2017). This was in contrast with the Igbo version of BSS, which had a Cronbach's alpha coefficient of 0.62 (Anikwe et al., 2022). Similarly, the findings on this study was not in tandem with that of Turkey, which revealed a Cronbach's alpha coefficient of 0.62, indicating moderate degree of reliability (Cetin, 2015). The findings were also in contrast with the Iranian BSSRI with Cronbach's alpha for Stress of Childbearing and Quality of Care subscales and total BSS-RI were 0.665, 0.847, and 0.563, respectively (Omani-Samani et al., 2021).

The Mean of BSS-RI total score was 9.89 which indicates an overall high level of satisfaction with intrapartum care. This was higher than what was obtained in Iran, which revealed the mean of BSS-RI total score was 6.16 (SD=2.60), and the

Stress of Childbearing and Quality of Care subscales were 2.71 (SD=2.39), and 3.45 (SD=1.11), respectively (Omani-Samani et al., 2021).

The successful adaptation and validation of the BSS-RI in the Hausa language are significant for healthcare providers and policymakers in regions where the Hausa-speaking population resides. It provides a valuable tool to assess the satisfaction of pregnant individuals with intrapartum care. Policymakers can use this information to tailor healthcare policies and practices to improve the quality of care during childbirth, ultimately leading to better maternal and infant outcomes.

The study's findings contribute to the body of knowledge in the field of maternal health and childbirth satisfaction. Researchers working in this area can now confidently use the Hausa version of the BSS-RI to conduct studies in this specific cultural context. This not only enables cross-cultural comparisons but also facilitates a deeper understanding of factors influencing birth satisfaction.

The study's alignment with similar research in Iran, Turkey, Greece, and Southern Nigeria highlights the potential for cross-cultural comparisons. It suggests that some aspects of birth satisfaction, as measured by the BSS-RI, may have cross-cultural applicability. Researchers can use this information to explore the similarities and differences in childbirth experiences and satisfaction across diverse populations.

The high mean score indicating a high level of satisfaction with intrapartum care among the Hausa-speaking population has practical implications. Healthcare providers can use this feedback to identify areas where they are performing well and continue to improve quality of care. It emphasizes the importance of maintaining high levels of care satisfaction to ensure positive birth experiences.

The study's findings also shed light on the reliability and validity of the BSS-RI in different cultural contexts. The variation in factor structures and internal consistency across studies (e.g., Greece, Turkey, Iran) underscores the importance of considering cultural factors when adapting and validating measurement tools. Researchers should be cautious when applying scales developed in one cultural context to another without validation.

The study's implications suggest opportunities for future research, including investigating the specific cultural factors that influence birth satisfaction in the Hausa-speaking population. Additionally, further exploration of the reasons behind variations in factor structures across different cultures could provide valuable insights.

Conclusion

In conclusion, this study has addressed a critical gap in maternal healthcare research by validating and adapting the Birth Satisfaction Scale – Revised Indicator (BSS-RI) to the Hausa language in the context of Kano, Nigeria. The findings have substantial implications for improving the quality of intrapartum care, enhancing maternal experiences, and ultimately contributing to the reduction of maternal mortality rates in low- and middle-income countries like Nigeria.

This validated tool has the potential to significantly impact maternal care in Nigeria. We recommend its incorporation into routine maternal care services, as it offers a practical means to monitor and enhance the quality of care provided during childbirth. By promoting positive birthing experiences and ensuring maternal satisfaction, the Hausa BSS-RI can play a pivotal role in reducing maternal mortality rates and improving overall maternal and infant well-being.

Competing interest

The author declare that there is no competing interest in conducting this research.

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