Development of a tool to assess students' perceptions of respectful maternity care

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Abstract

Objectives: To develop and test a tool to measure Bachelor of Nursing students' perceptions towards respectful maternity care in Nepal, a lower-middle income country.

Design: A cross-sectional design was used. Phases of tool development included item generation, expert review for content validity testing, and psychometric testing. The draft tool had 42 items on a 5-point Likert response scale of 1 = strongly disagree to 5 = strongly agree. Psychometric testing included dimensionality, internal consistency, and test-retest reliability. A t-test assessed mean score differences between students who had witnessed or not witnessed disrespect and abuse.

Settings: Two medical colleges in Chitwan, Nepal

Participants: Undergraduate Bachelor of Nursing students (n = 171) undertaking their midwifery clinical practicum were invited to complete the online survey.

Findings: Principal component analysis generated three factors: Respectful Care, Safety and Comfort, and Supportive Care and explained 37.44% of the variance. The 18-item tool demonstrated good internal reliability (Cronbach's alpha of 0.81). The mean total scale score was 71.23 (SD 7.47, range 52-88 out of 90). Pearson's correlation coefficient confirmed test-retest reliability at one week ($r = 0.91$, $p < 0.001$). The magnitude of difference in mean scores between those who had witnessed or not witnessed disrespectful and abusive care was very small ($\eta^2 = 0.04$).

Key conclusion: The new Student Perceptions of Respectful Maternity Care tool is the first valid and reliable measure of students' perceptions of respectful maternity care. Validation of the newly developed tool in other low- and middle-income countries is recommended.

Implications for practice: Measuring students' perceptions provides information to educators on how best to enhance students' understanding and provision of respectful care to women.

Keywords: Perceptions, respectful maternity care, reliability, validity, nursing, midwifery, instrument, survey

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Background

Respectful maternity care (RMC) is defined as "care organized for and provided to all women in a manner that maintains their dignity, privacy and confidentiality, ensures freedom from harm and mistreatment, and enables informed choice and continuous support during labour and childbirth" (World Health Organization, 2018, p. 3). Recently, a qualitative synthesis identified twelve domains of RMC: "being free from harm and mistreatment; maintaining privacy and confidentiality; preserving women's dignity; prospective provision of information and seeking of informed consent; ensuring continuous access to family and community support; enhancing quality of physical environment; providing equitable maternity care; engaging with effective communication; respecting women's choices that strengthens their capabilities to give birth; availability of competent and motivated human resources; provision of efficient and effective care; and continuity of care" (Shakibazadeh et al., 2018, p. 935). Dignified and respectful care focusing on women's individual, cultural, personal, and medical needs is essential for quality maternal health care (Miller et al., 2016).

Respect for human dignity, compassion, and promotion of human rights form part of the underpinning philosophy of practice espoused by both the International Council of Nurses (ICN) (2012) and International Confederation of Midwives (ICM) (2014). However, there is evidence that students from many countries witness disrespect and abuse during childbirth (Burrowes et al., 2017; Moyer et al., 2016; Rominski et al., 2017). Observing disrespect and abuse during their practicum and practising in environments where disrespect and abuse are widespread, may contribute to students believing that such behaviour is acceptable (Moyer et al., 2016). In one study, students reported that it was necessary to physically abuse (e.g., hit) women to gain compliance (Rominski et al., 2017). These students were willing to discuss the disrespectful and abusive behaviours they had shown to women without shame or fear (Rominski et al., 2017). Longstanding disrespectful care may lead to normalisation, making it less visible (Bowser & Hill, 2010). To reverse the normalisation of disrespectful and abusive care, changes in organisational, professional, and educational cultures are needed (Moyer et al., 2016). One starting point is to determine perceptions of RMC by future nurses/midwives.

In Nepal, maternity care is provided by different levels of nursing health professionals with qualifications including: Auxiliary Nurse Midwives (ANMs), Proficiency Certificate Level in Nursing (PCL), Skilled Birth Attendant (SBA), Bachelor of Nursing (BSc) and Bachelor of

Nursing Science (BNS), and Master of Nursing in Women's Health and Development (Bogren et al., 2013). An undergraduate midwifery degree commenced recently, but midwifery theory and practice continue to be integrated in nursing curricula.

Literature review

Every woman has the right to receive respectful care during labour and childbirth (White Ribbon Alliance, 2011). Disrespectful care is associated with low satisfaction with care (Kujawski et al., 2015), psychological distance between women and health care providers (Ishola et al., 2017), and low future uptake of facility-based health care by women (Ishola et al., 2017; Kujawski et al., 2015; Ndwiga et al., 2014) which may contribute to increased maternal and neonatal mortality and morbidity. Several qualitative studies have explored midwives' and students' perspectives of disrespectful and abusive care (Burrowes et al., 2017) and midwives' perspectives of RMC (Moridi et al., 2020b; Ndwiga et al., 2017). Some authors have used study-specific questionnaires to explore midwives' perceptions of disrespectful care (Afulani et al., 2020) and nursing students' perceptions of obstetric violence (Mena-Tudela et al., 2020). Recently, Moridi and colleagues used a mixed method approach to develop a measure of midwives' knowledge (23 items) and practice (23 items) of RMC during labour and birth in Iran (Moridi et al., 2020a). However, the yes/no response format for knowledge items limited response variance and internal consistency and items may not have accurately measured understanding. Our search of the literature did not identify any valid and reliable measure to assess undergraduate nursing/midwifery students' perceptions of RMC.

Aim

The current study aimed to develop and test a tool to measure Bachelor of Nursing students' perceptions towards respectful maternity care in Nepal, a lower-middle income country.

Methods and participants

Study context

This study was conducted at two medical colleges in Nepal offering a Bachelor of Nursing Science (BNS) and Bachelor of Science in Nursing (BSN). Students who were currently on or had recently completed their midwifery clinical practicum were invited to complete the survey.

Tool development

Development and testing of the tool followed guidelines described by DeVellis (2017).

Phase 1: Development of items

According to DeVellis (2017), authors need to determine clearly what is to be measured (Step 1). A deductive approach was used to generate potential items for the scale. Sources of information included: (1) searches of electronic databases CINAHL, Pubmed, Embase, MEDLINE (Ovid), PsycINFO, and the Cochrane Library; as well as (2) the research team's experience in tool development, education, and maternity practice. Search terms included respectful maternity care, respect, dignity, humanised care, disrespect and abuse, mistreatment, obstetric violence, childbirth, labour, intrapartum period, perception, knowledge, attitude, and practice.

The synthesis by Shakibazadeh et al. (2018) provided first-order and third-order themes which were used with permission as a basis for item development. The initial pool of items was developed by the first author reflected common disrespectful and abusive practices evident in low- and middle-income countries (LMICs) and discussed these with other members of the research team (Step 2). Use of a team to develop items is important as people express similar ideas in diverse ways (Polit & Beck, 2017). The response format (Step 3) was a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A mixture of positive and negatively worded items was included to reduce the risk of social-desirability response bias.

Phase 2: Assessing content validity

In this phase the clarity, relevance, and comprehensiveness of the draft items was assessed by a group of experts (Step 4) that reflected cultural diversity and views of students. Draft items were distributed to a panel of 10 experts (midwifery educators and researchers) from Australia, India, and Nepal. Experts had between 4 to 40 years of experience in midwifery education and clinical practice. Our collaborators in Nepal asked 25 students if they would be willing to be contacted by email and provide comment on the draft tool. The only identifying details were role (educator or student), years of experience, position, and country. The experts evaluated individual items as well as the overall scale on a 4-point scale for clarity (1 = not clear to 4 = very clear) and relevance (1 = not relevant to 4 = very relevant) and could provide suggestions for re-wording or additions. An Item Content Validity Index (I-CVI) which measures the concordance between scores given by experts was calculated and agreement of $\geq$0.80 was considered satisfactory (Polit & Beck, 2017). Based on the experts' feedback, items were revised, added, or deleted. In addition, a corrected item-total correlation was calculated and

any item with a value less than 0.3 was deleted. These processes reduced the number of potential items from 68 to 42.

Inclusion of items to determine predictive validity (Step 5) was undertaken by measuring the extent to which students witnessed different forms of disrespectful and/or abusive care (9 items) on a 4-point Likert of 1 = no, never to 4 = yes, all the time (Afulani et al., 2020)

Phase 3: Psychometric testing: assessment of dimensionality, internal consistency, and test-retest reliability

A cross-sectional survey (Step 6) was conducted. Survey results were analysed to reveal the underlying structure of the tool, internal consistency reliability of items, and their stability over time (test-retest reliability) (Step 7). To recruit a large sample, the survey was administered to students from two different colleges in Nepal and two different undergraduate nursing programs offering clinical experience in maternity units.

Sample Selection, Recruitment and Data Collection

All students in second or third year of the BNS from Chitwan Medical College (CMC) and Shree Medical and Technical College (SMTC) and students enrolled in the BSN third year and fourth year from these colleges were invited to participate in the survey in March 2021. Email invitations were sent to 268 students. Sample sizes greater than 100 are ideal for tool development. Based on a ratio of 5 participants per item (Tinsley & Tinsley, 1987) a sample of around 210 (for 42 items) was required. One hundred and seventy-one students completed the survey, equivalent to just over four participants per item.

The survey included an information sheet and questions related to (1) students' sociodemographic details (age, college attended and year of study) and clinical placement (number of births observed and assisted, and type of facility for these births); (2) the draft RMC tool; and (3) extent to which students witnessed nine forms of disrespectful and/or abusive care (such as "treated women in an unfriendly manner", "shout at, scold, insult, threaten, or be rude to women") (Afulani et al., 2020). The survey was uploaded using LimeSurvey software as it is flexible and accessible, allows various question types, and can collect responses anonymously. Program convenors from participating colleges who were not involved in the research, sent an email with a link to the survey to students. The program convenors had no knowledge about whether students chose to participate or not. Completing the survey implied consent. To increase the response rate, a follow-up reminder was sent after one week (Polit &

Beck, 2017). Students at one site were sent an email with a survey link one week following completion of the initial survey for test-retest reliability. A one-week interval between test and retest was chosen to prevent contamination by changes in perceptions of students and memory effects (Bolarinwa, 2015). Studies have shown no differences in test-retest reliability for 2 days versus 2 weeks (Marx et al., 2003).

Ethical Considerations

Ethical approval was granted by Griffith University Human Research Ethics Committee (GU reference number 2021/034) and Nepal Health Research Council (NHRC reference number 2170). Permission was also obtained from administrators of both colleges to survey students.

Statistical Analysis

Data were downloaded from LimeSurvey in excel and imported into the Statistical Package for the Social Sciences (IBM-SPSS, Chicago, IL, USA) for Windows version 27. An inter-item correlation matrix was generated. Items with a corrected item-scale correlation coefficient of <0.3 were inspected and removed from the item pool (Polit & Beck, 2017).

Exploratory factor analysis (EFA) assessed the underlying structure (dimensionality) of the tool and reduced the number of items to ensure a parsimonious set (DeVellis, 2017). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (value above 0.6) and a significant Bartlett's test of sphericity indicated appropriateness of data for factor analysis. Principal component analysis (PCA) was used to extract the factors, followed by oblique rotation of factors using oblimin rotation (DeVellis, 2017; Polit & Beck, 2017). The number of factors to be retained was guided by three decisions: eigenvalues >1, inspection of scree plot and Horn's parallel analysis. Parallel analysis is one of the most accurate approaches of estimating the number of components to retain (Hayton et al., 2004). Eigenvalues obtained from the PCA will be compared with those obtained from a randomly generated data of the same size using Monte Carlo PCA for Parallel Analysis (Watkins, 2012). Items with a loading ≥0.4 were considered acceptable (Floyd & Widaman, 1995).

Internal consistency reliability was calculated using Cronbach's alpha coefficient for total scale and subscales, using values above 0.7 (Bland & Altman, 1993). Test-retest reliability of the tool was estimated by Pearson's correlation coefficient. Correlations between 0.10 and 0.29 were considered small, between 0.3 and 0.49 medium, and between 0.5 and 1.0 large (Cohen, 1988).

Descriptive statistics were used to analyse participant demographic and clinical placement details. Total and subscale raw scores, means, standard deviations (SD) and ranges were calculated. Responses to witnessing disrespectful and abusive care were summed to produce a total score and categorised into 'not witnessed' (score of 9) and 'yes witnessed" (scores of 10 and above). An independent t-test compared total mean scores for disrespectful and abusive care for the two groups (witnessed and not witnessed disrespectful care). It was hypothesised that students who witnessed more disrespect would report lower scores on the draft RMC scale.

Findings

Characteristics of participants

A total of 171 completed responses were received (response rate of 63.8%). The average age of students was 23.68 (SD 2.44, range = 20 to 34 years). More than half of the students were from site A (59.6%, n = 102) and in a BSN program (52.6%, n = 90). Around half (48%, n = 82) were in the third year of their program. All students had experienced between two and 20 weeks (mean 6.28 and SD 4.04) of the clinical practicum component of their program in midwifery. The average number of childbirths observed during their clinical practicum was 19.6 (SD 12.03, range = 2 to 50). Almost all students (99.6%, n = 170) had assisted women during labour and birth, ranging from one to forty women (mean 12.15, SD 8.59). Students predominantly attended births in a district hospital (60.2%, n = 103) and/or teaching hospital (49.1%, n = 84).

Table 1

Characteristics of Participants (n = 171)

Characteristic	Number (%)
Age of participants (years)	
Min = 20 Max = 34	
Mean = 23.68 SD = 2.44	
College	
Site A	102 (59.6)
Site B	69 (40.4)
Course	
Bachelor of Nursing Science (BNS)	81 (47.4)
Bachelor of Science in Nursing (BSN)	90 (52.6)
Year level	
Second year	33 (19.3)
Third year	82 (48.0)
Fourth year	56 (32.7)
Clinical placement duration (weeks)	
Min = 2; Max = 20	
Mean = 6.28, SD 4.04	
Number of births observed	
Min = 2; Max = 50	
Mean = 19.60, SD 12.03	
Assisted birth during clinical placement	
Yes	170 (99.4)
No	1 (0.6)
Number of births assisted (n = 170)	
Min = 1, Max = 40	
Mean = 12.15, SD = 8.59	
Place of birth during clinical practicum*	
District hospital	103 (60.2)
Teaching hospital	84 (49.1)
Private health facility	17 (9.9)
Home	3 (1.8)
Other	6 (3.5)

*Multiple responses possible

Factor analysis

Prior to conducting the PCA inter-item correlation coefficients were calculated and 17 items with coefficients of less than 0.3 were removed. Suitability of data for factor analysis was confirmed by KMO (0.81) and Bartlett's test of sphericity was significant. PCA with oblimin rotation revealed seven factors with eigenvalues exceeding 1 that accounted for 56.13% of observed variance. However, inspection of the scree plot revealed a clear break between the third and fourth components suggesting a three-factor solution. Parallel analysis, using Monte

Carlo PA software-generated random data, also confirmed three factors. The three-factor solution explained 37.44% of the variance, with Factor 1 contributing 21.88%, Factor 2 contributing 9.08% and Factor 3 contributing 6.49%.

During the extraction process, two items were deleted for low factor loadings (<0.4), one item was deleted for low cross loadings on two factors, one did not load any factor, and three items were deleted for low communalities (<0.3) (see Table 2). Three factors were named according to the underlying construct: 'Respectful Care' (Factor 1, ten items); 'Safety and Comfort' (Factor 2, five items); and 'Supportive Care' (Factor 3, three items). The scale was named Student Perceptions of Respectful Maternity Care (SPRMC).

Table 2

Pattern Matrix and Communalities

Items	**Pattern coefficients**			**Communalities**
	Components			
	1	**2**	**3**	
Factor 1 Respectful Care				
13. I am too busy to greet every woman with a smile. (R)	0.71			0.53
4. Scolding a woman is necessary if she does not cooperate with health care providers. (R)	0.70			0.50
18. I am often too busy to provide birth options to women. (R)	0.65			0.38
15. Women's cultural beliefs are so varied that staff cannot be expected to accommodate them all. (R)	0.65			0.40
11. Confidentiality is hard to maintain in maternity care. (R)	0.62			0.39
22. It is often hard to keep a calm environment for women during labour. (R)	0.59			0.42
16. There is no point providing all the details about birth procedures because some women will not understand. (R)	0.54			0.37
9. I agree that women should "leave their dignity at the door" as there is nothing private about giving birth. (R)	0.48			0.31
14. Routine procedures like vaginal examination and abdominal palpation do not require permission. (R)	0.46			0.31
25. If women do not look after their own health, they should not expect the same treatment as others. (R)	0.43			0.34
Factor 2 Safety & Comfort				

8. I try to limit exposing a woman's body when providing care.		0.74		0.62
19. I explain benefits and risks to a woman before any procedure.		0.72		0.54
6. I have a responsibility to help women feel safe during labour and birth.		0.66		0.50
5. Labouring women need a birth space free from unnecessary disturbance by others.		0.62		0.40
12. Actively listening to women's stories values their experiences.		0.48		0.35
Factor 3 Supportive Care				
42. Women should be encouraged to talk to other postpartum women about their experiences.			0.75	0.46
41. Every woman should receive support she needs with breastfeeding.			0.72	0.46
30. Women should be encouraged to actively participate in their care.			0.64	0.39

(R) indicates reverse scored

Scale Statistics and Reliability

Analysis of internal consistency showed a good Cronbach's alpha of 0.81 for the 18-item scale with 0.81 for the Respectful Care subscale, 0.69 for Safety and Comfort, and 0.62 for Supportive Care. Test-retest reliability was confirmed for the total scale and subscales (see Table 3).

Descriptive statistics were generated for the SPRMC scale and subscales (see Table 3). The total mean score was 71.23 ± 7.47. Between 6% and 44% of students had witnessed some form of disrespect and abuse during their midwifery clinical practicum (see Table 4). An Independent-samples t-test showed no significant difference in scores for those who had witnessed (n = 33, Mean 71.18, SD 7.30) or not witnessed (n = 138, Mean 71.45, SD 8.25) disrespect and abuse [t (169) = 0.188, p = 0.85]. The magnitude of mean difference was very small (0.273, 95% CI: -2.59 to 3.14) (eta squared = 0.037).

Table 3

Descriptive statistics, reliability, and test-retest reliability of SPRMC scale

Scale	Number of items	Mean (SD)	Median (IQR)	Range	Cronbach's alpha	Test-retest reliability (Pearson's Correlation)
SPRMC (total)	18	71.23 (7.47)	71.0 (76-66)	52-88	0.81	0.91 (p<0.001)
Respectful care	10	36.54 (6.05)	36.0 (41-33)	19-50	0.81	0.76 (p<0.001)
Safety & comfort	5	21.57 (2.27)	22.0 (23-20)	5-25	0.69	0.49 (p = 0.03)
Supportive care	3	13.12 (1.35)	13.0 (14-12)	5-15	0.62	0.51 (p = 0.03)

SD = Standard Deviation, IQR: Inter-Quartile Range

Table 4

Responses on witnessing disrespect and/or abuse during clinical placement

Items	No (%)	Yes (%)
During my clinical placement I have seen staff-		
1. treat women in an unfriendly manner.	98 (57.3)	73 (42.7)
2. shout at, scold, insult, threaten, or be rude to women.	113 (66.1)	58 (33.9)
3. push, slap, or pinch women if they did not co-operate.	131 (76.6)	40 (23.4)
4. physically restrain or gag women when giving birth.	160 (93.6)	11 (6.4)
5. perform a procedure without consent.	154 (90.1)	17 (9.9)
6. leave women exposed.	131 (76.6)	40 (23.4)
7. allow other people not involved in a woman's care to be present at the birth.	96 (56.1)	75 (43.9)
8. talk about a woman's health information with others not directly involved in her care.	113 (66.1)	58 (33.9)
9. treat women differently because of their personal attributes (age, ethnicity).	129 (75.4)	42 (24.6)

Discussion

To the best of our knowledge, the SPRMC tool is the first of its kind internationally. This study showed the new SPRMC tool has acceptable psychometric properties. Content validity was based on an extensive review of the literature review, mapping on the 12 domains of RMC developed by Shakibazadeh et al. (2018) and expert review. The final version of the SPRMC

tool retained most of the RMC domains. Evidence of construct validity was informed by an EFA, which showed stability of three factors. The RMC domains were reflected in the three subscales. The SPRMC tool showed good internal consistency reliability and test-retest reliability in this sample.

Promoting RMC is an effective strategy to improve maternal utilisation and quality of maternity care (Vogel et al., 2016). Measuring students' perceptions of RMC during labour and birth is an important preliminary step to guide the development and implementation of RMC education, practice interventions, and measure effectiveness. Previously, a 46 item tool (23 items in each knowledge and practice component) had been developed to measure Midwives' Knowledge and Practices of Respectful Maternity Care (MKP-RMC) in Iran (Moridi et al., 2020a). This scale consists of three domains namely 'giving emotional support', 'providing safe care' and 'preventing mistreatment' with binary response options that may not adequately capture awareness of RMC. In contrast, the new SPRMC tool uses a five-point Likert scale to measure students' perceptions of RMC. Likert response scales are relatively simple, reliable, and valid for measuring a range of attitudes (Mellor & Moore, 2013).

The domains of the SPRMC tool are in accordance with the MKP-RMC scale (Moridi et al., 2020a). In addition, the items reflect components of the RMC charter developed by White Ribbon Alliance (2011) in the context of: right to information; right to informed consent and refusal, and respect for choices; dignity and respect; confidentiality and privacy; and equality. Furthermore, the subscales of the SPRMC tool are in line with tools developed to measure women's perceptions of RMC (Afulani et al., 2017; Ayoubi et al., 2020; Sheferaw et al., 2016; Taavoni et al., 2018).

The ten-item 'Respectful Care' subscale captures most of the domains of RMC (Shakibazadeh et al., 2018) namely 'preserving women's dignity', 'free from harm and mistreatment', 'prospective provision of information and seeking informed consent', 'maintain privacy and confidentiality', 'enhancing quality of physical environment and resources', and 'equitable maternity care'. Subscale items are similar to the 'giving emotional care' and 'providing safe care' domains of MKP-RMC scale (Moridi et al., 2020a). All women need and deserve respectful care. Health care providers need to incorporate basic human rights while caring for women during labour and birth including respect, dignity, confidentiality, privacy, information and informed consent, and freedom from discrimination and all forms of mistreatment (White Ribbon Alliance, 2011). However, interactions between health care providers and women

should not be the only the factor considered for respectful care; health care facilities and health systems should also aim to provide adequate staffing levels and remuneration for health care staff (World Health Organization, 2018).

The 'Safety and Comfort' subscale captures four domains of RMC namely 'maintaining privacy and confidentiality', 'prospective provision of information and seeking informed consent', 'being free from harm and mistreatment', and 'engaging with women through effective communication'. Items of this subscale are similar to 'providing safe care' and 'preventing mistreatment' domains of MKP-RMC scale (Moridi et al., 2020a). Women are entitled to adequate information about the risks and benefits of a procedure. Inadequate information and consultation may contribute to feelings of disrespect (Baker et al., 2005). Active listening by staff is an effective strategy to help establish trust and understanding with women (World Health Organization, 2018). Furthermore, effective communication is an important element of the WHO framework for improving quality of care (World Health Organization, 2016).

The 'Supportive Care' subscale contains items related to support, encouragement, and active involvement of women in their care. The items of this subscale are in line with the 'continuity of care', and 'respect for women's choices that strengthen their capabilities to give birth' domains of RMC (Shakibazadeh et al., 2018). Continuous support of women has been associated with shorter labours, decreased use of analgesia, increased incidence of spontaneous vaginal birth, reduced negative childbirth experiences, decreased rates of caesarean birth and instrumental vaginal birth, and improved newborn Apgar scores (Bohren et al., 2017). Likewise, women's active involvement in the care, recommended by the WHO, promotes a sense of self-worth (Melender, 2006).

This study revealed no difference in the mean SPRMC score of students 'witnessing' or 'not witnessing' disrespect and abuse. However, over 40% of students had witnessed staff being unfriendly towards women and not respecting their privacy. Around a third reported incidences of staff shouting at and scolding women. This is supported by a recent study in Nepal where women experienced various forms of disrespect and abuse such as episiotomies and suturing performed without adequate anaesthesia, physical abuse (bitten, slapped, rough touch), non-confidential care, non-dignified care (not speaking politely), discrimination based in social attributes, neglected care, and the exclusion of husbands (Ghimire et al., 2021). These findings flag the importance of education about RMC and diligence by clinical facilitators and all

hospital staff in not tolerating such behaviour. Debriefing about such experiences could be used to help students as well as midwives/nurses develop empathy, stress management techniques, and woman-centred care strategies.

Implications and recommendations

The SPRMC tool was found to be a valid and reliable measure of nursing students' perceptions of RMC, but further testing is required to establish its utility for midwifery students, practising midwives in other LMICs. In addition, measures of related constructs could be used to test concurrent validity in the future. The SPRMC tool can make a valuable contribution to safe and high-quality care to women during labour and childbirth by assessing students' understanding of RMC during their program. Following further testing, the SPRMC tool could also be used to evaluate graduate nurses' and midwives' understanding of RMC prior to employment. Outcomes of regular surveys could be used to enhance curricula for nursing and midwifery students as well as training of other maternity health care providers. The SPRMC tool could also contribute towards the development of more effective RMC interventions, as it offers more generalisable insights than previous qualitative studies (Moridi et al., 2020b; Rominski, 2015). The use of a standardised tool can provide a platform for consistency of data collection enabling comparison of results over time at individual practice sites, between sites and between undergraduate nursing and midwifery programs.

Strengths and limitations

This study is the first to report the development of a tool with good psychometric properties to measure students' perceptions towards RMC. The SPRMC is a multidimensional scale developed using a comprehensive literature review and the twelve domains of RMC (Shakibazadeh et al., 2018). But there are some limitations associated with this study. Students were recruited from two medical colleges in Nepal which may limit the generalisability of findings, but a good response rate, enrolment in two different undergraduate nursing programmes and diverse practice settings were a strength. Due to lack of available valid tools to measure perceptions of RMC, it was not possible to establish concurrent validity. Although items were generated to capture all the domains of RMC, items related to 'ensuring continuous access to family and community support', 'availability of competent and motivated human resources', and 'provision of efficient and effective care' could not be captured during psychometric analysis. This may be due to the complex nature of RMC and different perspectives of respondents on RMC.

Conclusion

This study revealed that the 18-item SPRMC tool is a valid and reliable tool to measure nursing students' perceptions of RMC. Positive perceptions are important to promote quality and respectful care to women during labour and birth. Students' responses on the tool can foster purposeful consideration by academics to improve students' quality of care to women using RMC approaches. The SPRMC tool offers an important step in the quality improvement cycle and enhancement of maternal and neonatal mortality and morbidity. There was no relationship on SPRMC scores between those who witnessed or had not witnessed disrespectful and abusive care. However, this finding requires further validation with a large sample from different settings.

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