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Research Paper

Perception of caring behavior and associated factors among nurses and midwives working in public hospitals in Southern Ethiopia

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ABSTRACT

Objective: This study aimed to assess the perception of caring behaviors and associated factors among nurses and midwives who provided maternal health care services at Sidama region public hospitals, Hawassa, Ethiopia.

Methods: An institutional-based cross-sectional study design was used on a sample of 269 nurses and midwives working in maternity wards in Sidama region public hospitals. A self-administered questionnaire was used to collect data. Bivariate and multivariable logistic regression analysis was used to identify factors associated with nurses' and midwives' perceptions of caring behaviors.

Results: Totally 261 nurses and midwives participated the survey. Based on the mean score, participants' perception of caring behavior was classified as higher and lower. According to this study, 75.1% (196/261) of nurses and midwives demonstrated a higher perception of caring behavior. Respondents' age, professional satisfaction, personal satisfaction, midwife/nurse-doctor relationship and workload were significantly associated with their perception of caring behavior.

Conclusions: Assessing the nurses' and midwives' perception of caring behavior and related factors is crucial for providing high-quality nursing and midwifery interventions. It is suggested to create a positive and conducive caring behavior in the organization by reducing excessive workload of nurses and midwives, as well as enhancing nurse/midwife-doctor relationship, and increasing their job satisfaction by providing recognition and reward will improve nurses' and midwives' caring behavior.

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What is known?

- Caring is universally recognized to be an essential component of nursing and midwifery around the world. Effective caring promotes healing, health, individual and family growth, a sense of wholeness, and inner peace that transcends disease, trauma, or life changes.

- There is a growing concern in developing countries about a lack of care in childbirth settings. Despite the fact that there is a scarcity of data, few studies has been conducted in Ethiopia on nurses' and midwives' perceptions of who provided maternal health care service caring behaviors and associated factors.

What is new?

- This study revealed that the majority of nurses and midwives demonstrate a good perception of caring behavior at Sidama region public hospitals, Hawassa, Ethiopia.
- Age, job satisfaction, relationship with a physician, and workload of nurses and midwives were factors associated with their perception of caring behavior.

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1. Introduction

Caring is a fundamental human need as well as an essential component of the nursing and midwifery professions [1]. Caring is central to midwifery and nursing practice. Effective caring promotes healing, health, individual and family growth, a sense of wholeness, and inner peace that transcends disease, trauma, or life changes [2]. Nursing care is stated through nurses caring behaviors, but a lack of professional caring results in reduced well-being and health of the patient. In fact, many nurses do not demonstrate caring behavior when providing nursing care to patients [3,4]. As a result, nurses' caring behaviors influence patient satisfaction, nursing care quality, and changes in patients' plans to return to the institution for care, all of which are important indicators of quality services [5]. The professional responsibility of the maternity health care provider is to provide high-quality nursing care for a better patient outcome. According to Watson's theory, nursing is centered on assisting the patient in achieving a higher degree of harmony within mind, body, and soul, and this harmony is achieved through caring transactions involving a transpersonal caring relationship. Caring is defined as midwives' actions that show women kindness and respect, provide them with privacy and make them feel comfortable, and provide them with psycho-social and emotional support as needed [6].

Concrete nurses-midwives caring behaviors are used to validate all client-centered nursing care [7]. Individualized and mother-centered labor and childbirth are recommended by international policies and programs to ensure effective maternity services that result in better physical, emotional, and psychological outcomes [2]. Lack of respect from maternal health care providers may lead to dissatisfaction with Antenatal Care, delivery, and postnatal services, as well as a decrease in healthcare-seeking behavior and attendance at health care facilities [8]. Client-centered care during the perinatal period greatly reduces preventable maternal and newborn death [9]. As proposed by the WHO, good communication, respect, dignity, and emotional support are key areas to provide quality care for a pregnant woman [10]. Caring is universally recognized to be an essential component of nursing and midwifery around the world. There is a growing concern in developing countries about a lack of care in childbirth settings [6]. Caring behaviors of midwives and nurses are associated with mothers' satisfaction with their childbirth experience [2]. Positively perceived caring behavior is organized for and to provide care to all women in a way that protects their confidentiality, dignity, and privacy, ensures their freedom from mistreatment and harm, and allows for continuous support and informed choice during labour and childbirth [11]. Negatively perceived caring behavior during the perinatal period may discourage women from giving birth and seeking medical help in health facilities [12].

Nurses' lack of patient-centered caring behavior, on the other hand, has a negative impact on patients' well-being and health. As a result, nurses' caring behaviors and the quality of nursing care can have an impact on patient satisfaction [13]. Evidence from different studies shows that in nursing practice the nurses' perception about nurse caring behaviors are determined by different factors like socio-demographic characteristics, educational background, workload, job satisfaction, their interaction with co-worker/doctors, satisfaction with the nursing profession, working environment, and work experience [14–17].

Over the past ten years, the Ethiopian Federal Ministry of Health has undertaken various reform efforts to improve the quality of nursing care and increase patient satisfaction across the country [18,19]. Nurses' perceptions of caring behaviors and their determinants have been investigated in various clinical care settings around the world in nursing studies to monitor and improve the

quality of care. Despite the fact that there is a scarcity of data, no study has been conducted in Ethiopia on nurses' and midwives' perceptions of who provided maternal health care service caring behaviors and associated factors. The purpose of this study was to assess nurses' and midwives' perceptions of caring behaviors toward maternal health care services and significant related factors in a clinical care setting, as well as to recommend better professional care behavior in the study setting.

2. Methods

2.1. Study design, area and period

An institutional based cross-sectional study was conducted in public hospitals in Sidama Regional state, Southern Ethiopia from May to July 2021. Hawassa is the capital city of the Sidama region; Hawassa is located to the south of Addis Ababa, Ethiopia's capital. The region has 18 public hospitals, including one comprehensive specialized hospital known as Hawassa University Comprehensive Specialized Teaching Hospital, which is the largest referral hospital in southern Ethiopia and is run by the Ethiopian Ministry of Health. There are three general hospitals and 14 primary hospitals in the region. The study has been reported in line with a consensus-based checklist for reporting of survey studies (CROSS) [20].

2.2. Study participants

All nurses and midwives working in Public Hospitals of Sidama Regional state were source population. Nurses and midwives who were available during the data collection period in those selected public hospitals were selected as the study population. All nurses and midwives who had at least 6 months of work experience and who were on working in the maternity care unit during the data collection period were included.

The sample size for this study was determined using a single population proportions formula. According to a study conducted in Jimma, 80.3% have a positive perception of nurse caring behaviors [14]. The margin of error is 5%, and the confidence interval is 95%. Based on the assumptions made above, the minimum sample size for this study is 244. Using a 10% non-response rate, the final sample size was 269. From total 18 public hospitals in Sidama regional state, 6 public hospitals were selected for this study. A sampling frame was prepared for each hospital by obtaining lists of maternity service provider nurses and midwives from the hospital nursing-midwife directors and human resource management, and study participants were selected using a simple random sampling technique. The study units were then allocated proportionally to each hospital based on the number of nurses and midwives in each hospital.

2.3. Data collection

Data were collected using Amharic version self-administered questionnaires. Data collection tools consist of four-part questionnaires: questionnaires of sociodemographic and economic, job satisfaction, working environment, and caring behavior perception that were adapted from previous studies.

Six midwives with Bachelor's degree and two supervisors were involved in data collection period. The following measure has been implemented to ensure data quality. Data collectors and supervisors were appropriately trained for one day. A pre-test was conducted on 5% of the sample size. Throughout the entire data collection period, data collectors were daily supervised and reported to the principal investigator on a daily basis.

2.3.1. Questionnaire of socio-demographic and economic-related factors

We collect basic socio-demographic and economic-related information from study participants, such as age, sex, profession, work experience, income, marital status, and level of educational status with this questionnaire.

2.3.2. Perception of caring behavior

Perception of caring behavior was measured by the adopted version of Caring Behaviors Inventory (CBI) [21]. The tool was originally developed by Wolf with 75 items and subsequently reduced to 43 items with five dimensions [22,23]. The CBI items were further reduced to 24 in order to make participation easier and to reduce research costs. It was adopted by reviewing previous different literatures [21,24], with Cronbach's α coefficient of 0.96 [21,25]. The tool has four subscales and 24 items, including knowledge and skill (5 items), assurance (8 items), respectful (6 items), and connectedness (5 items) [21]. The possible score range was 24–144. Then the perception of caring behavior was classified as higher and lower perception of caring behavior based on the mean score [24,26,27].

2.3.3. Job satisfaction related factors

The job satisfaction scale was adapted from the McCloskey/Mueller Satisfaction Scale (MMSS) and previous study which has a Cronbach's α coefficient of 0.95 [24,28–30]. Job satisfaction was measured using 14-item scales with three subscales including personal, professional, and pay and prospect scales. All scale items were graded on a 4-point Likert scale, with response options ranging from 1 (extremely dissatisfied) to 4 (extremely satisfied or very satisfied) [16,24,29]. Professional satisfaction was measured by the satisfaction of nurses related to their work and their relationship with colleagues using 5 items [24,29]. Personal satisfaction was measured by the perception of nurses related to their skills and challenges in the workplace using 5 items [24,29]. Satisfaction with pay and prospect was measured by job-related praises and recognition from the organization for their achievement using 4 items [24,29]. Then, based on their mean or average score, all job satisfaction subscales were classified as lower or higher [16].

2.3.4. Working environment related factors

The working environmental tool was adapted from previous studies [16,31–33]. Working environment characteristics were assessed using the 13-item scale with three subscales including adequate staffing and support, workload, and nurse-doctor relationship [16]. These items were also evaluated on a 5-point Likert scale, with response options ranging from 1 (never) to 5 (always). The workload items, on the other hand, were answered with response options ranging from 1 (never stressful) to 4 (extremely stressful or always stressful) [14,16,17,34]. Then working environment related subscales were classified as lower or higher based on their mean score [16,17,31,33].

2.4. Data analysis

The data were coded, entered into a predesigned data template using Epi data version 3.1, and exported to SPSS version 25 statistical packages for analysis. At the start of the analysis, scores for the overall items of the CBI, as well as each subscale of job satisfaction and working environment, were computed. A health care provider perception score was calculated, and for each questionnaire item, mean scores and standard deviations were calculated to determine the higher and lower perceptions of caring behaviors. The perception was broadly classified as higher and lower perception, with higher perception referring to responses for values greater

than the mean value and lower perception referring to those whose value is less than the mean value. The means, standard deviations, and frequencies of the study variables were presented using descriptive statistics. A multivariable logistic regression analysis was used to identify associated factors, and variables with an independent association with perception of caring behavior were identified using odds ratios with a 95% confidence interval and a P -value less than 0.05. The Hosmer and Lemeshow goodness of fit test ($P = 0.95$) was used to assess model fitness, and the variance inflation factor was used to assess multicollinearity.

2.5. Ethical considerations

The Institutional Research Ethics Review Board of Arba Minch University College of Medicine and Health Sciences provided ethical approval. Support letters were sent to the hospitals where the study was conducted. The heads of each hospital, as well as midwives and nurses, provided informed, voluntary, written, and signed consent. Before administering the questionnaires, the study's objectives were explained to the participants, and information was provided about how confidentiality and anonymity were maintained throughout the data collection process, as participants were not required to disclose personal information on the questionnaire. The confidentiality of data obtained from participants was ensured by excluding personal identifiers. Furthermore, data was password-protected and only investigators had access to it. During data collection, COVID-19 prevention and protection procedures were strictly followed.

3. Results

3.1. Socio-demographic and economic characteristics of study participants

In this study, 261 nurses and midwives participated, with a 97.0% (261/269) of response rate. The mean age of the respondents were 28.4 ($SD = 3.8$) years. The majority (77.0%) of the respondents were female, and more than half (50.6%) were married. In terms of education, 82.0% of respondents had a Bachelor's degree in Midwifery. One hundred twenty-seven (48.7%) of study participants had less than 5 years of work experience (Table 1).

3.2. Job satisfaction and working environment related information

The mean score of professional satisfaction was 11.01 ($SD = 2.57$), personal satisfaction 9.97 ($SD = 2.18$), and satisfaction with pay and prospect 11.58 ($SD = 2.73$). In terms of working environment characteristics, the mean score of nurse/midwife-physician relationship was 14.64 ($SD = 3.04$).

3.3. Perception of caring behavior and associated factors

The magnitude of higher perception of caring behaviors among nurses and midwives working in maternity care wards was 75.1% with a 95% CI (69.4–80.5).

Age, professional and personal satisfaction, relationship with doctors, and presence of workload were statistically significant factors associated with perceived caring behaviors in the multivariate analysis. Respondents over the age of 35 years were 92% more likely to perceive higher caring behaviors than those under the age of 24 years ($aOR = 0.083$, 95% CI 0.07–0.86). Higher job satisfaction increased the likelihood of nurses and midwives having a higher perception of caring behaviors by 1.88 times compared to nurses and midwives with lower job satisfaction ($aOR = 1.88$, 95% CI 1.61–5.80). Nurses and midwives with higher personal satisfaction

Table 1

Sociodemographic characteristics among nurses and midwives working in maternity ward in public hospitals of Sidama region, Southern Ethiopia, 2021 (n = 261).

Variable	Category	n (%)
Age, years	≤24	28 (10.7)
	25–29	167 (64.0)
	30–34	33 (12.6)
	≥35	33 (12.6)
Sex	Male	60 (23.0)
	Female	201 (77.0)
Marital status	Married	132 (50.6)
	Single	129 (49.4)
Monthly income, US\$	≤80	11 (4.2)
	81–160	230 (88.1)
	≥161	20 (7.7)
Education	Diploma nurse	18 (6.9)
	Diploma midwife	22 (8.4)
	Bsc midwife	214 (82.0)
	Bsc nurse	7 (2.7)
Work experience, years	<5	127 (48.7)
	5–10	102 (39.1)
	≥11	32 (12.3)
Position/title	Staff midwife	230 (88.1)
	Staff nurse	12 (4.6)
	Head midwife/nurse	12 (4.6)
	Supervisor midwife/nurse	7 (2.7)
Working unit	Obstetric ward	180 (69.0)
	Gynecologic ward	81 (31.0)

were six times more likely than those with lower personal satisfaction to perceive higher caring behaviors (aOR = 6.04, 95% CI 4.49–7.87). Nurses and midwives who have a better relationship with doctors were 5.1 times more likely than those who have a relatively poor relationship to perceive higher caring behaviors (aOR = 5.10, 95% CI 1.94–13.5). Nurses and midwives who worked in a higher-workload environment were 89% less likely than those who worked in a lower workload environment to perceive higher caring behaviors (aOR = 0.11, 95% CI 0.04–0.30) (Table 2).

4. Discussion

4.1. Perception of caring behavior among nurses and midwives

Caring is central to midwifery and nursing practice. Effective care promotes healing, health, individual and family growth, a sense of wholeness, and inner peace that transcends disease, trauma, or life changes. Nurse/midwifery caring behavior will have a significant impact on service quality and client satisfaction [35]. This study determined the perception of caring behavior and associated factors among nurses and midwives working in maternity wards in public hospitals in the Sidama region.

In this study, the magnitude of higher perception of caring behaviors among nurses and midwives was 75.1% with a 95% CI (69.4–80.5). This finding is consistent with the findings of a study conducted in Jimma [14]. However, this result was higher than in studies conducted in Gondar [16], and Harari [17]. This variation could be attributed to differences in sample size and study timing. Furthermore, differences may occur due to variations in the study tool used to measure the caring behavior dimension. This study finding also lower than a study in Egypt [36]. This difference may be due to the difference in organizational nature, study setting, sample size, prevailing attitude given by society, nursing/midwifery curriculum, and culture [7,37].

4.2. Factors associated with perception of caring behavior

This study also indicated that respondent age, job satisfaction,

good doctor-nurse/midwife relationships, and presence of workload were all significantly associated with perceptions of caring behavior. The odds of having a higher perception of caring behavior were 92% more likely among nurses and midwives over the age of 35 compared to those under the age of 24 years old. This finding is in line with a study conducted eastern part of Ethiopia [17], and Saudi Arabia [27]. The possible explanation may be that as they get older, nurses and midwives more adapt to their jobs and develop positive attitudes toward caring behavior.

This study found that nurses and midwives who were highly satisfied with their jobs were 1.88 times more likely to have a higher perception of caring behaviors than nurses and midwives who were lower satisfied with their jobs. Furthermore, nurses and midwives who reported higher levels of personal satisfaction with their nursing and midwifery work were six times more likely than those who reported lower levels of personal satisfaction to demonstrate higher levels of caring behavior. This finding was supported by other studies conducted in Carolina [38], Philippines [39], Indonesia [40], South Africa [41], and Ethiopia [14,16,17,24]. Caring may be a personal and professional value, as well as a nursing/midwifery identity, which may influence perceptions of caring behaviors [16]. One possible explanation is that job satisfaction influences perceptions of professional caring behaviors by increasing the motivation of nurses and midwives.

Nurses and midwives with a higher level of doctor-nurse/midwife relationships were 5.1 times more likely to have a higher perception of caring behaviors than those with a relatively poor level of doctor-nurse/midwife relationships. This finding was supported by studies conducted in various parts of Ethiopia [14,16,17,24], and Malaysia [42]. The reason for this could be that better relationships between physicians and nurses-midwives help to create a positive environment and a sense of autonomy for nurses and midwives, allowing them to demonstrate good caring behavior.

This study finding also revealed that nurses and midwives with a higher workload were 89% less likely to have a higher perception of caring behavior than nurses and midwives with a lower workload. This finding was also congruent with studies conducted in Ethiopia [16,24], and Indonesia [43,44]. Workload was found to be inversely related to all CBI sub-dimensions [45]. This may be because more stressed health care providers spend insufficient time with their patients. But another study conducted in Indonesia was inconsistent with this finding [46]. This may be due to differences in sample size, sociocultural and study setting.

4.3. Limitations of the study

There are some limitations of this study. Since it was a self-administered questionnaire the response may be exposed to social desirability bias. Because the data are cross-sectional, the direction of a causal relationship between variables cannot always be determined. Lack of extensive literature on perception of caring behavior among nurses and midwives working on maternal health care services area to compare and discuss some of the findings.

5. Conclusions

Assessing the nurses' and midwives' perception of caring behavior and related factors is crucial for providing high-quality nursing and midwifery interventions. In this study, 75.1% of nurses and midwives working in maternity wards have higher perception of caring behaviors. Age, job satisfaction, relationship with a physician, and presence of workload were found to be associated factors with the perception of caring behaviors. We suggest creating a positive and conducive caring behavior in the

Table 2

Factors associated of perception of caring behavior among nurses and midwives working in maternity ward in public hospitals of Sidama region, Southern Ethiopia, 2021.

Variable	Category	Perception of caring behavior, n (%)		cOR (95% CI)	aOR (95% CI)
		Lower level	Higher level		
Age, years	≤24	13 (46.4)	15 (53.6)	1	1
	25–29	29 (17.4)	138 (82.6)	4.12 (1.77–9.58)	2.04 (0.53–7.80)
	30–34	12 (36.4)	21 (63.6)	1.51 (0.54–4.23)	0.26 (0.04–1.84)
	≥35	11 (33.3)	22 (66.7)	1.73 (0.61–4.88)	0.08 (0.01–0.57)*
Work experience, years	<5	29 (22.8)	98 (77.2)	1	1
	5–10	31 (30.4)	71 (69.6)	0.67 (0.37–1.22)	0.45 (0.13–1.60)
	≥11	5 (15.6)	27 (84.4)	1.59 (0.56–4.52)	4.16 (0.63–27.16)
Marital status	Married	23 (17.4)	109 (82.6)	1	1
	Single	42 (32.6)	87 (67.4)	0.43 (0.24–0.78)	0.14 (0.04–1.45)
Level of professional satisfaction	Lower	30 (42.3)	41 (57.7)	1	1
	Higher	35 (18.4)	155 (81.6)	3.20 (2.74–9.09)	1.88 (1.61–5.80)*
Level of personal satisfaction	Lower	49 (51.0)	47 (49.0)	1	1
	Higher	16 (9.7)	149 (90.3)	9.70 (5.05–8.64)	6.04 (4.49–7.86)*
Level of satisfaction with pay and prospect	Lower	35 (41.2)	50 (58.8)	1	1
	Higher	30 (17.0)	146 (83.0)	3.40 (1.90–6.10)	0.50 (0.16–1.53)
Level of relationship with doctors	Lower	44 (50.6)	43 (49.4)	1	1
	Higher	21 (12.1)	153 (87.9)	7.40 (4.01–13.86)	5.10 (1.94–13.5)*
Work load	Higher	23 (13.7)	145 (86.3)	1	1
	Lower	42 (45.2)	51 (54.8)	0.19 (0.10–0.35)	0.11 (0.04–0.30)*

Note: cOR = crude odds ratios. aOR = adjusted odds ratio. *P < 0.05.

organization by reducing excessive workload of nurses and midwives, as well as enhancing nurse-doctor relationship, and increasing their job satisfaction by providing recognition and reward will improve nurses' and midwives' caring behavior. More research is needed to determine the significance of individual caring behaviors for nurses/midwives. Further research comparing nurses/midwives' and mothers' perceptions of caring behaviors is also recommended.

Credit authorship contribution statement

Abreham Assefa: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, writing - original draft, Writing, review and editing, Project administration **Dinkalem Getahun:** Data curation, software, visualization, supervision, Writing, review and editing **Nathan Desalegn:** Writing, review, editing, Visualization, Investigation, and draft preparation. **Etenesh Kefelew** Validation, Formal analysis, Writing, Reviewing and Editing. **Wondwosen Molla:** Methodology, Validation, Formal analysis, supervision and Validation. **Dawit Getachew Assefa:** Validation, Formal analysis, Writing, Reviewing and Editing. **Mesfin Abebe:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Writing, review, editing and project administration.

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Data availability statement

The datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

Declaration of competing interest

The authors declare they have no conflicts of interest.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijnss.2022.09.014>.

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