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KNOWLEDGE, EDUCATION, BELIEFS AND PRACTICES OF NURSES FOR SKIN-TO-SKIN CONTACT

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Abstract

The exposed child is placed face down on the naked chest of mother during the first skin-to-skin contact (SSC), with a warm blanket covering the back. At the time of delivery, skin-to-skin interaction between the mother and child decreases crying, enhances mother-infant communication, keeps the baby warm, and aids in successful breastfeeding. In order to lower the amount of milk given before nursing and to enhance the mother's role, prolonged postpartum CSS is crucial. Skin-to-skin (SSC), chest-to-chest contact among newborns as well as their mothers is defined as Kangaroo Mother Care. Psychological and physiological advantages of skin-to-skin care for mothers and newborns are well-developed in literature. WHO (World Health Organization) advised to use SSC for preterm and term newborns. SSC are not being used as widely as advised. When practice is not optimal, inadequate knowledge and personal beliefs and attitudes are usually the contributing factors. Insufficient evidences in relation to nurse's perspective and information regarding SSC. The main theme of the study is to understand and evaluate the significance of nurse's knowledge, belief and expertise with regard to skin to skin contact therapeutic applications. This cross-sectional descriptive study collects data from 40 nurses using knowledge and beliefs questionnaire developed by Dr. Ludington-Hoe. This study has used SPSS version 16 in order to evaluate the collected data in an efficient manner. Results: The malicious age of nurses was 42.4 (SD=3.2) with the practice of 12 (SD = 2.1) years. The knowledge level of nurses was 2.7 (SD = 0.8) where 37.5% of the nurses were unsure in relation to the impact of SSC in reducing the danger of lessened brain development in neonate. Pearson correlation test revealed significant link among implementation of SSC and knowledge level ($r = 0.297$, $P = 0.031$), SSC implementation and nurse education ($r = 0.85$, $p = 0.015$), and implementation of SSC and nurses' beliefs ($r = 0.31$, $r = 0.024$). It is likely that SSC will be practiced as widely as recommended if the nurses have adequate knowledge and education and positive beliefs in relation to SSC.

Keywords: "Skin to skin contact, Nurses, Knowledge, Beliefs, Practicing"

Introduction

The knowledge, attitudes, training, and skin-to-skin behaviors of healthcare practitioners have all been the subject of several studies. Skin-to-skin contact was minimal, but the nurses' perception of skin contact was adversely affected by their lack of knowledge. Evidence-based and prenatal practices should be replaced with evidence-based practices, according to nurses' professional obligations [22]. Nurse's knowledge with regard to skin to skin contact can be enhanced by using evidence-based practice. Evidence-based practice provides high-quality treatments that support nursing, patient education, and health outcomes. It blends research findings with clinical expertise and patient values.

It is important for nurses to obtain current knowledge and its significance of skin to skin contact for enhances labor care. Early skin-to-skin contact is a concrete illustration of a useful evidence-based intervention that must be implemented into routine newborn care, which offers moms and babies a positive and beneficial experience. In the absence of skin contact, babies are more susceptible to thermal pressure. The inability of infant to keep a constant body temperature may result in issues like hypothermia or overheating. Skin-to-skin contact calms the baby and the mother easing tension for both parties. Without this interaction child can experience increased stress levels, which could harm physical and psychological health [1]. Additionally, skin-to-skin contact is linked to better nursing results, reduced stress, and a baby's general wellbeing. Skin to skin contact practice encourages proper latching and posture, which stimulates babies' natural nursing instincts and makes breastfeeding more successful. Skin-to-skin contact boosts the release of hormones that support milk production and production through intimacy and physical contact.

Kangaroo care also recognized as the skin-to-skin contact that is a form of neonatal care for infants. It is an established, easy to use and powerful way to promote the wellbeing and health of premature and mature infants. World health organization [1] defined as a treatment in a natural way that involves skin-to-skin contact by keeping a early baby between the breasts of the mother or the chest of father. Intermittent SSC is another modified form of KMC, can be defined as a the practice of holding the baby straight to the chest of the parent in a way that provides more contact with bare skin, thus providing newborn the chance to adapt to the atmosphere external to the womb [2]. Preferably, SSC is made right away after birth and whenever parents can do so within the first few days of a baby's life. That is why, likened to SCC and KMC, the description of KC is general, and is more extensively used in clinical rehearsal [3].

KC preterm infants through imitation of intrauterine environment employ the warmth and calming heartbeat as a instrument for tactile encouragement [4]. Kangaroo care is a humble evidence based preparation that can protect the life of new born baby. It promotes growth, reduces the time of hospitalization and reduces morbidity [5, 6]. It also enhances the compatibility of saliva levels between the infant and mother [7]. This practice not only improves the physiological conditions of newborn baby such as temperature, sleeping pattern, breathing and heart rate but can also positively effects the psychological status of the mother after childbirth [8, 9]. With much research, it has now been said that kangaroo care is the basic element of proper prenatal care that ultimately contributes to both short term and long term beneficial effect on children [10]. KC is a substitute to standard care and it is simple, affordable, acceptable as well as suitable to the mothers [11, 12]. On the contrary, KC requires strict compliance as it involves health workers, mothers and children [13].

The basic topographies of KC include: primary, prolonged and continuous skin to skin interaction between mother and child; complete breast feeding preferably; started in hospital but should also be done at home after discharge; young children are discharged prematurely; sufficient follow up and help for mothers at home and an effective and gentle approach as it minimizes stress, which is general in crowded regions of preterm infants [14].

However, numerous challenges have hindered the widespread use of KC. In 2003, a collection of neonatal health investors talked about the significance of hurrying the execution of KC to achieve the "Millennium Development Goals" by pointing out urgencies of research, addressing people

about the barriers to implementation of application of KC, and merging KC with the "Reproductive Maternal Newborn and Child Health package" [15]. Significantly, differences in the KC application are connected to levels of user engagement and stakeholder involvement. The former can be encouraged by improving knowledge levels and addressing the barriers among the nurses working in NICUs [16].

The nurses play a very important role in the care of the baby and help the mother to improve her attachment with the baby at neonatal intensive care units (NICU). According to the researchers, the attitude of nurse could influence her performance and cooperation with the mother in using KC [17]. The goal of this study is to access the main perception what nurses thought about employing KC affected mother-infant bonding in the NICU.

Methods

This cross-sectional correlational descriptive research was made in a tertiary clinic. A purposive sampling strategy was implemented to all available nurses who were working in the obstetrics and pediatric units and were willing to participate in the study. It is advisable by [24] to use purposeful sampling when samples are limited. Moreover, purposive sampling generally used when researchers wish to reach a portion of the population with particular traits such as skin to skin contact knowledge is not common among all nurses. This research was evaluated as well as approved by the domain of biomedical ethics study committee at the Shalamar medical and dental college, Lahore.

The email of respective hospital was employed to send the online questionnaire to the executive of nursing and was asked to send the questionnaire to neonatal nurses working in their NICUs. It was assumed that these indulges had not got any prescribed education on Kangaroo Care before. The survey questions was sent only to one hospital across two weeks. It was completed with the assistance of online software. Finished questionnaires were entered and stowed in a Microsoft Excel program.

The study has used the Kangaroo Care Knowledge and Confidence Tool developed by Almutairi & Ludington-Hoe [18], comprising 19 items separated into four main factors: "SSC knowledge (5 items), attitudes and beliefs (3 items), SSC education (5 items), and SSC implementation (6 items)". A five-point Likert scale ranges from strongly agree to strongly disagree was used to measure items. To measure the validity of the translated version, principal component analysis (PCA) showed alpha reliability of 0.79-0.90 for all factors. The use of respective tool has been seen in previous studies; for instance, Zhang et al [3] used this tool to evaluate the present beliefs, practices and knowledge in relation to KC across the nurses, and found important findings related to the perception of neonatal nurses.

Descriptive statistics and Pearson correlation test were applied to answer the questionnaire items using the Statistical Package for Social Sciences (SPSS) software, version 16.0. Frequency and percentages were employed to describe definite variables, and mean ± SD was used to present continuous variables. Pearson correlation has been used to recognize the correlation between the variables of research. P-values <0.05 were considered as significant. Four variables have been used in correlation analyses which are "Knowledge, Attitudes and beliefs, education, and implementation".

Results

A total of 40 nurses participated, including 22 NICU nurses, 10 labour and delivery nurses, and 8 postpartum care unit nurses. With an average age of 42.4 years (SD = 3.2) and years of experience, all nurses were female; 50% of the nurses were Pilipino. With respect to SSC knowledge, the mean of knowledge score was (2.7 [SD = .8]); followed by attitude and beliefs (2.48 [SD= .74]), education (3.43 [SD= 1.02]); and implementation score was (3.39 [SD = .93]).

Table 1: Nurses' perceptions toward SSC Knowledge

	SD	D	N	A	SA	Mean	SD
SSC Knowledge	N (%)	N (%)	N (%)	N (%)	N (%)		
I am confident in my ability to interpret infant responses during SSC.	4 (10%)	18 (45%)	5 (12.5%)	10 (25%)	3 (7.5%)	8	5.54
Lack of SSC in the neonatal period has long term adverse effects.	5 (12.5%)	16 (40%)	11 (27.5%)	6 (15%)	2 (5%)	8	5.52
SSC can reduce the risk of impaired brain development in neonates.	4 (10%)	14 (35%)	15 (37.5%)	5 (12.5%)	2 (5%)	7.52	6.04
I feel confident with my skills in recognizing & assessing the physiologic/behavioral responses of infants during SSC.	4 (10%)	16 (40%)	6 (15%)	13 (32%)	1 (2.5%)	7.4	6.28
SSC changes brain growth in the neonate.	2 (5%)	22 (55%)	12 (30%)	3 (7.5%)	1 (2.5%)	7.92	8.97

When asked if they were confidence in their abilities to decipher infant responses during SSC, 45% of the participants disagreed. In a similar vein, 40% disagreed that the lack of SSC during the newborn period results in negative long-term repercussions. Additionally, 55% of the nurses disagree that SSC alters the neonate's brain growth, while 37.5% of the nurses were uncertain about its ability to lower the risk of defective brain development (Table 1).

The mean score for the attitudes of nurses was 2.5 (SD =.74), with 67% of nurses disagreeing that SSC intervention should be promoted by nurses, 52% of nurses disagreeing that SSC can minimize discomfort from minor procedures like gavage tube placement and oral suctioning, and 50% expressing lack of confidence(Table 2).

Table 2: Nurses' perceptions toward SSC attitudes and beliefs

	SD	D	N	A	SA	Mean	SD
SSC Attitudes and Beliefs	N (%)	N (%)	N (%)	N (%)	N (%)		
Discomfort from minor procedures, such as gavage tube placement & oral suctioning can be minimized with SSC	3 (7.5%)	21 (52.5%)	6 (15%)	9 (22.5%)	1 (2.5%)	8	7.04
It is the responsibility of nurses to be an advocate for skin-to-skin holding for neonates in their care	4 (10%)	27 (67.5%)	6 (15%)	2 (5%)	1 (2.5%)	8	9.65
I feel confident in my skills to safely facilitate skin-to-skin holding with neonates	4 (10%)	20 (50%)	5 (12.5%)	9 (22.5%)	2 (5%)	8	5

In terms of education, the mean score was 3.4 (SD = 1.02); 47% of the nurses disagreed that their units provided any ongoing training related to SSC; 37.5% were unaware of SSC policies or procedures in their units; and 37.5% had not participated in any educational events involving SSC in the previous five years. However, 45% of units employed reliable measurements of child reactions during SSC, and 47.5% used SSC assessment tools (Table 3).

Table 3: Nurses' perceptions toward SSC education

	SD	**D**	**N**	**A**	**SA**	**Mean**	**SD**
SSC Implementation	N (%)	N (%)	N (%)	N (%)	N (%)		
I feel confident with my skills in recognizing and assessing the physiological and behavioral responses of infants to KC (STSC).	0 (0%)	9 (22.5%)	8 (20%)	15 (37.5%)	8 (20%)	7	4.79
I feel confident in my use of KC (STSC) in my unit	1 (2.5%)	11 (27.5%)	3 (7.5%)	17 (42.5%)	8 (20%)	7	4.27
T I am confident in my ability to interpret infant responses to KC	0 (0%)	11 (27.5%)	6 (15%)	14 (35%)	9 (22.5%)	7	4.67
Physicians are willing to use new evidence-based application of SSC on my unit.	0 (0%)	15 (37.5%)	10 (25%)	10 (25%)	5 (12.5%)	7	4.19
I feel confident in my skills to safely administer KC (STSC) to neonates.	0 (0%)	13 (32.5%)	4 (10%)	14 (35%)	9 (22.5%)	7	5.21

With respect to SSC implementation, the mean score of the SSC implementation was 3.4 (SD = .93) with 42.5% disagree that the guidelines or protocols of SSC were clear; 37.5% disagree that doctors were seeking to adopt new argument-based development of SSC in their areas; while at the same time 32.5% did not get any training rendering SSC. In the same time, 42.5% agree that their units use SSC regularly, and 35% agree that they use SSC with eligible neonates (Table 4).

Table 4: Nurses' perceptions toward SSC implementation

	SD	**D**	**N**	**A**	**SA**	**Mean**	**SD**
SSC Implementation	N (%)	N (%)	N (%)	N (%)	N (%)		
I feel that the provision of SSC on my unit is well managed.	0 (0%)	9 (22.5%)	8 (20%)	15 (37.5%)	8 (20%)	8	4.77
My unit uses skin to skin holding regularly.	1 (2.5%)	11 (27.5%)	3 (7.5%)	17 (42.5%)	8 (20%)	8	5.72
The health care providers on my unit practice adequate SSC with eligible neonates.	0 (0%)	11 (27.5%)	6 (15%)	14 (35%)	9 (22.5%)	8	4.77
Physicians are willing to use new evidence-based application of SSC on my unit.	0 (0%)	15 (37.5%)	10 (25%)	10 (25%)	5 (12.5%)	8	5.09
I have received adequate education or training regarding SSC when I was oriented to my unit.	0 (0%)	13 (32.5%)	4 (10%)	14 (35%)	9 (22.5%)	8	5.32
The SSC guidelines/protocols are clear, comprehensive and based on current research.	0 (0%)	17 (42.5%)	5 (12.5%)	12 (30%)	6 (15%)	8	5.88

Table 5 shows Pearson correlation conclusions and revealed a significant positive association between implementation of SSC with level of nurse's education (r = .84, P = 0.00); SSC implementation and nurse's attitudes (r = 0.32, p = 0.02), and SSC with nurse's knowledge (r = 0.3, p-value = 0.03).

Table 5: Correlation Analysis

	Knowledge	Attitudes & beliefs	Education	Implementation
Knowledge	1	0.397 (0.006)	0.311 (0.025)	0.297 (0.031)
Attitudes and beliefs	0.397 (0.006)	1	0.342 (0.015)	0.316 (0.024)
Education	0.311 (0.025)	0.342 (0.015)	1	0.846 (0.000)
Implementation	0.297 (0.031)	0.316 (0.024)	0.846 (0.000)	1

Discussion

This study presented the education, knowledge and attitudes of nurses of regarding SSC in the hospital setting. The findings showed significant correlation between the education, attitudes and knowledge of nurse in relation to SSC and the implementation of SSC in tertiary hospital. Nurses' knowledge and implementation of SSC was insufficient regarding SSC indicating the reason why SSC does not practice properly in the setting. This finding was supported with the findings previous studies made in the US who provided the similar evidence regarding the knowledge-practice gap and the effect of the knowledge of nurse on practicing SSC [18, 19]. Also, the study findings were aligned with Al-Shehri and Binmanee study at Riyadh city in Saudi Arabia. Attitudes and beliefs of the nurses regarding practicing SSC have vital role for optimal practicing. Attitudes can be improved by increasing the level of confidence and knowledge in nurses on their skills regarding SSC [18, 20].

The findings have shown that nurses did not receive any continuing education in their units and did not attend any educational courses, workshops or conferences in the last five years which have the strong effect on the implementation of the SSC in their units. The findings were consistent with previous studies showing significant relationship between in-service education and the practices of SSC [18, 21, 22]. Lack of education was considered one of the barriers of SSC practice. Provision of continuing education for the staff nurses has increased nurse's awareness and level of knowledge regarding SSC that ultimately supports the optimal practice [18, 22].

The findings have further indicated significant relationship between the participant's knowledge and attitudes between knowledge and education. Nurses' who have higher level of knowledge expressed additional positive attitude toward practicing SSC, and nurses who got more education in their units expressed higher level of knowledge. These findings were similar to previous studies across Saudi Arabia [18, 20, 23].

There are different limitations faced in this research. A small sample size of applicants chosen, due to the selecting of only obstetrics and pediatrics regions, having smaller number of staff comparing with other units. Based on the study findings, it is recommended to provide continuing workshop and courses in relation to the rationalized indication of SSC as well as the training lab in order to support the skills of nurses rendering the adopting of SSC for term preterm, as well as the NICU newborns. Also, this research has recommended to establish clear guidelines and policy for the implementation of SSC in the procedure and policy books in every obstetric and pediatric area.

Conclusion

SSC between mothers and newborns is major and beneficial practice that should be practiced optimally per advised from WHO and from national and internal organizations. The education, beliefs and knowledge of Nurse are significant traits for the optimal usage of SSC; although until now several researches showed inadequate level of experience and unclear guidelines and policy in the healthcare setting that imped the practice of SSC and also have inferior effects on the attitudes and belief of nurse. SSC is an influential method that has been overwhelmingly reported to refer its advantages to promote its optimal use. However, the beliefs of the nurses for standard evaluations deny their inadequacy toward the use of SSC. Additional research is required for reproducing this project and for investigating its generalizability using the lens of nurses. In addition, it is important for maternal care leadership to prefer training to better prepare health care providers with knowledge in delivering best practice care interventions.

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