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Midwifes' Opinions about Reinforcing Factors in Skin to Skin Contact, Immediately After Delivery: A Descriptive Study

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Abstract

Aim: Benefits of Skin-to-Skin Contact (SSC) between mother and her newborn, specifically when it is conducted immediately after birth, have been recognized for more than 40 years. To determine why SSC is not conducted, the present study considers the opinions of the labor working midwifes about the reinforcing factors in SSC immediately after birth in Tehran's hospitals in 2012-2013.

Methods: In this descriptive study, we have employed the reinforcing factors of the phase 3 of PRECEDE-PROCEED model. The samples consisted of 292 midwifes who were responsible for delivery or for newborns immediately after birth in 18 hospitals of Tehran. The sampling was firstly performed using stratified and then simple random manner. They were classified into educational, social security, and private hospitals. Data collection instrument was a self-developed questionnaire consisting of demographic characteristics, social support and midwifes' motivation to conduct the reinforcing factors in the SCC at birth. It was derived from a qualitative study. Internal consistency of the questionnaire was assessed using Cronbach's alpha coefficient. Data analysis was conducted through applying the SPSS version 18.

Findings: The results show that 93.8% of midwifes had a good idea about social support of the midwifes with Cronbach's alpha 0.744 and 96.6% of them believed in the Midwifes ' motivation in skin contact effects with Cronbach's 0.773.

Conclusions: The midwives believed in the key role of reinforcing factors such as social support and their own motivation in successful and standard SSC. Therefore, further studies are suggested on exploring the opinions of pediatric, obstetrics and anesthesia specialists, midwives, mothers and their husbands concerning the SSC.

Keywords: Reinforcing Factors, Hospitals, Midwives, Skin to Skin Contact

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Introduction

Skin-to-skin contact means newborns are put belly-down, directly on the mother's chest, just after birth [1]. It is the innate behavior of the newborns which is habitat dependent and necessary for survival. In mammalian biology, maintenance of the maternal milieu following the birth is an innate behavior among the newborn and the mother, which leads to successful breast feeding, and survival [2].

Findings of studies over the last 25 years suggest that the first hour after birth is a critical time for bonding mother and child, when both are ready for a coordinated reciprocal interaction [3-8]. Instinctive feeding behaviors including seeking and breastfeeding start at this point [9]. The other advantages are improvement of mother's ability to care for her child [10], reduced stress of mother and newborn [11], long term positive impact of attachment behaviors [11-13], regulation of breathing, heartbeat, and body temperature of the newborn, calm sleep, shortened interval between delivery and breastfeeding, success in first breastfeeding, elongation of breastfeeding period [14], and reduced child cries [15].

In the first few hours after birth, newborn is in a unique state called the quiet alert state [16]. Early initiation SSC and breastfeeding in the first hour of the birth can prevent 22% of mortality among the one-month newborns in developing countries; and lead to 22% death reduction among the newborns of 1-28 days [17]. SSC responses may also promote the newborn's neurobehavioral self-regulatory after birth [11]. Benefits of contact between mother and newborn specifically at the very beginning after the birth have been recognized for more than 40 years [13].

Initiation of the breast feeding in this way is a basic step of the "Ten Steps to Successful Breastfeeding" as well as a basis of "Baby Friendly Hospital Initiative" [18]. Public agencies, NGOs, UNICEF and WHO recommend that breast feeding should be initiated within the first hour after the birth and advocate it as an exclusive feeding for the first 6 months of life [19].

Skin contact is a simple and cost-effective method for improving post-delivery care, encouraging exclusive breastfeeding, and increasing the duration of breastfeeding [20] by midwifes. Midwife is important in the field of labor, social health, obstetrical consulting and the related services. He or she is the first person who contacts the newborn and the first caregiver after birth. To determine why SSC is not conducted at birth, it is important to know the opinion of midwife about SSC at birth. Despite the benefits of mother-newborn skin-to-skin contact immediately after birth, the process has not been implemented as a routine care for neonates in Iran. For this purpose, the present study considers the opinions of the

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labor working midwifes' about the reinforcing factors in SSC between mother and newborn, immediately after birth based on PRECEDE-PROCEED model developed by Green and Kreuter in 1970 for health education and improvement planning [21]. This model helps authorities plan and reinforce the behavior and stabilize it through continuation, repetition and reward the behavior. The factors include social support, peer group, family, authoritative individuals, employers, teachers, healthcare personnel, leaders and decision-makers [22, 23].

Methods

In this study, we have used a descriptive method and the reinforcing factor of the phase 3 of PRECEDE-PROCEED model. The samples consisted of 292 midwifes who worked in labor rooms of Tehran's hospitals. Inclusion criteria were as follows: participants must work at labor rooms; delivery must be conducted by midwifes or they must be in charge of the newborn immediately after birth.

Since, the services and responsibilities of the midwives are different at various hospitals, sampling was firstly performed using a stratified and then simple random manner [24]. In this study, the hospitals were affiliated to the Shahid Beheshti Medical Sciences University, Tehran-Iran. They were divided into five regions of north, south, west, east and center. They were classified into private, social security, and educational groups. The name of hospitals were written and put in three bowls, based on the classification and one hospital was selected randomly from each bowl. The process continued until the end of sampling, so that 300 midwives of the 18 hospitals of Tehran were selected using total population sampling [25-27]. All midwifes under study permitted the research to be conducted. In our study, data collection instrument was a questionnaire designed in the qualitative process of the study, concerning the reinforcing factors in the SCC between mother and newborn immediately after birth.

Initially, the questionnaire was designed based on 19 focus group discussion sessions. Each session was held for 1.5-2 hours and in total 150 midwifes participated and commented about each item. Afterwards, each question was prepared through content analysis and qualitative content validity and confirmed by a panel of 15 experts. Additionally, face validity was confirmed by 7 midwives.

In order to evaluate the instrument's qualitative validity we applied content method along with content validity ratio (CVR) based on the three-sectional spectrum: a) the item is necessary, b) the item is useful but is not necessary, and c) the item is not necessary. The least acceptable score was 0.4 based on the Lawshe Table. We also used the content validity index (CVI) of Waltz and Bausell

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based on the three criteria: relevance, simplicity and clarity classified separately based on Likert's 4- score scale. Acceptance criterion of each item was 0.79 and higher [27-30]. The instrument was a self-developed questionnaire consisting of 9 demographic characteristics: midwife's age, age of last child, type of hospital, employment status, marital status, degree in midwifery, gravidity, number of children and midwife's job interest. Ten items related to the social support of midwife concerning the SSC between mother and newborn at birth, the related Cronbach's alpha was 0.744 which revealed a good reliability; seven items were devoted to midwife's motivation in conducting SSC at birth, the related Cronbach's alpha was 0.773 which represents a good internal consistency. At this step, the three-scale Likert from 0 to 2 grading system were applied.

Therefore, the maximum raw scores for the social support of midwife with 10 questions was 20, for midwife's motivation with 7 questions was 14 and their minimum scores was zero. At this stage, all the achieved values were transformed into percentage. Concerning the social support of midwife for SSC between mother and newborn immediately after birth, the scores were classified into three groups of below 33%, between 33 and 66% and over 66% for weak, medium and good social support levels, respectively. Regarding the Midwife's motivation, the above percent groups revealed again the same levels of weak, medium and good, respectively.

On the other hand, the item impact method was used to reduce the items and to determine each item's importance. The method was accompanied by a five-scale Likert's score and the least acceptable score of 1.5 [27, 31-33]. The number of experts panel was 15 and consisted of midwives, newborn specialists, gynecologist, epidemiologist, midwives' trainer, health education and qualitative research experts. In order to determine the questionnaire's reliability, we used Cronbach's alpha with criteria of less than 0.5 as non-acceptable, 0.5-0.6 weak, 0.6-0.7 moderate, 0.7-0.8 acceptable, 0.8-0.9 good and higher than 0.9 as excellent [27]. It was applied once for two sections and once for all items related to the reinforcing factors.

The samples received the encoded questionnaires and 292 were completed and returned. Finally the collected data were analyzed and interpreted using SPSS-18 through descriptive statistics.

Results

In this study, 292 midwives were recruited, with the mean age of 36.06±8.72 and with the mean work experience of 11.07±8.29 years; their last child was at the age group of 1-9 (46.6%); the demographic and obstetric

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characteristics of the samples are presented in Table 1.

Table 1: Distribution of the demographic and obstetric characteristics of the labor working midwives of Tehran's hospitals

Frequency **demographic and** **obstetric characteristics of Midwifes**	**N and (%)** **N=292**	
Type of Hospital	Educational	125 (42.8)
	Organization of Social Security	80 (27.4)
	Private	87 (29.8)
Employment status	Official	124 (42.5)
	Contractual	29 (9.9)
	By project	92 (31.5)
	Mandatory service	47 (16.1)
Marital status	Married	180 (61.6)
	Single	111 (38.1)
	Divorced	1 (0.3)
Midwife degree	Associate's Degree	14 (4.8)
	Bachelor's Degree	257 (88.0)
	Master's Degree	21 (7.2)
Midwife's job interest	Yes	231 (79.1)
	No	61 (20.9)
Number of gravidity **N=148**	Once	65 (43.9)
	Twice	76 (51.4)
	Three times	7 (4.7)
Number of children **N=148**	One	64 (43.2)
	Two	75 (50.7)
	Three	9 (6.1)

In this study, statements with CVR values of equal to/ higher than 0.40 and with CVI scores of equal to/ higher than 0.79 were recorded. The minimum and maximum factor impact scores were recorded as 3.57 and 4.67, respectively. The midwives' opinions about the reinforcing factors concerning the SSC between mother and newborn immediately after birth were classified in two categories, the social support (Tables 2) and the midwife's motivation (Tables 3. As you see in Table 2, concerning the subjects' opinions about the social support of midwives, most of them answered "yes". The results show that 93.8% of the interviewees had a good idea

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about social support of midwives. In other words, a high percent of midwives confirm that the social support of midwife may reinforce SSC between mother and newborn at birth.

Table 2: Distribution of the labor working midwives' responses to the questions about the social support of SSC immediately after birth in Tehran hospitals.

Questions of social support of midwife about SSC immediately after birth N=292	**Yes(2)**	**Don't know(1)**	**No(0)**
1-Physician's support will improve skin-to-skin contact.	262(89.7)	23(7.9)	7(2.4)
2-Anesthesiologist's support will improve skin-to-skin contact.	197(67.5)	66(22.6)	29(9.9)
3-Pediatrician's support will improve skin-to-skin contact.	228(78.1)	44(15.1)	20(6.8)
4-Hospital authorities' support will improve skin-to-skin contact.	244(83.5)	35(12)	13(4.5)
5- Midwife's support for skin contact will encourage its implementation.	281(96.2)	9(3.1)	2(0.7)
6-Support of mother's relatives improves skin-to-skin contact.	241(82.5)	29(9.9)	22(7.5)
7-The husband's support improves skin-to-skin contact.	261(89.4)	22(7.5)	9(3.1)
8-Encouraging colleagues improve skin-to-skin contact.	271(92.8)	18(6.2)	3(1)
9-Encouraging the midwife by hospital authorities will improve skin-to-skin contact.	279(95.5)	10(3.4)	3(1)
10-Patient's confidence in the delivery team improves skin-to-skin contact.	274(93.8)	14(4.8)	4(1.4)
Score < 33=0(0)	Score 33-66=18(6.2)	Score > 66=274(93.8)	
Reliability Statistics	Cronbach's Alpha	0.744	

Table 3: Distribution of the labors working Midwives' responses to the questions about the motivation toward the SSC immediately after birth in Tehran hospitals

Questions about the midwife's motivation in conducting SSC immediately after birth N=292	**Yes(2)**	**Don't know(1)**	**No(0)**
1-Mother's calmness during skin-to-skin contact will encourage the midwife.	276(94.5)	11(3.8)	5(1.7)
2-Newborn's calmness during skin-to-skin contact will encourage the midwife.	255(87.3)	24(8.2)	13(4.5)
3-Mother's satisfaction with skin-to-skin contact will encourage the midwife.	279(95.5)	10(3.4)	3(1.1)
4-Midwife's awareness of advantages of skin-to-skin contact improves its implementation.	282(96.6)	9(3.1)	1(0.3)
5-Midwife's desire for skin-to-skin contact will encourage her to perform it.	278(95.2)	11(3.8)	3(1)
6-Mother's desire for skin-to-skin contact will encourage the midwife.	275(94.2)	12(4.1)	5(1.7)
7-Mother's request for skin-to-skin contact will encourage the midwife to perform it.	280(95.9)	8(2.7)	4(1.4)
Score < 33=1(0.3)	Score 33-66=9(3.1)	Score > 66=282(96.6)	
Reliability Statistics	Cronbach's Alpha	0.773	

Most of the interviewees answered "yes" to the questions of midwife's motivation toward the SSC at birth. As you see in the Table3, 96.6 percent of the interviewees believed in the

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midwife's motivation in skin contact effects (Table 3). Finally, the instrument of reinforcing factors with 17 questions and two sections was evaluated as good reliability, with the Cronbach's alpha of 0.801.

Discussion

In this study most of the labor working midwives scored the social support as one of reinforcing factors' sub-structure positively. It means that they agree with SSC between mother and new born immediately after the birth. They believe that other health teams' support including pediatric physicians, anesthesia specialists, women physicians and hospitals' authorities may facilitate SSC process.

In other words, opinions of other health teams are of great importance in the successful SSC between mother and new born immediately after birth. The findings of the research are in conformity with those of Lawrence (2005) and Glanz (2008) which assume that the social support is an effective factor for continuation, repetition and enhancement of the behavior and awards to sustain it [22, 23].

The findings also show that mother's encouragement by relatives, husband and midwife makes her eager to conduct SSC; most of the midwives answered the related questions "yes". It means that they believe in effectiveness of such support.

On the other hand, they assume that mothers' confidence to her midwife and health team leads to more cooperation in SSC process, as a result of which the probability of SSC success increases. Again, this finding is confirmed by Lawrence (2005) and Glanz (2008) concerning the presence of the coevals, family and health personnel. Moreover, most of the midwives believed that if they are encouraged by colleagues and authorities to conduct SSC, the probability of successful and standard SSC process increases. The same is again confirmed by Lawrence (2005) and Glanz (2008) concerning the employers and influential individuals [22, 23].

Another finding of the research relates to the midwife's motivation to conduct SSC. The sub-structure was evaluated as good with regard to the labor working midwife's opinions. They assumed that high motivation is critical in SSC process. Also, they mostly pointed to mothers' calmness during SSC, mother's willingness and satisfaction and mother's request for SSC as important motivators.

Moreover, a high percent of the labor working midwives believed that their own knowledge and interest in SSC motivates them to conduct the SSC. One may consider it in conformity to the findings of Glanz and Lawrence concerning to decision makers and at the same time it may be assumed as a new finding, since we have suggested that mother's calmness enhances midwife's motivation.

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Lack of social support and motivation are among common barriers to successful and standard SSC. The problem may be solved through education of all health team members including pediatric and women physicians, anesthesia specialists and midwives. In addition, informing mother, husband and other relatives about the SSC benefits is effective in SSC's success. Besides, proper environment and conditions provide mothers with calmness and in turn increase the midwife's motivations to conduct successful and standard SSC.

There was no similar research or at least we did not find any similar study in the literature. Therefore, we may claim that our study is unique in Iran or even in the world.

Conclusion

In this study, the labor working midwives believed in the key role of enabling factors such as social support and their own motivation in successful and standard SSC. Therefore further studies are suggested on exploring the opinions of pediatric, women and anesthesia specialists, midwives, mothers and their husbands concerning the SSC. The findings would be the basis for providing the health team members, mothers and husbands with necessary educations.

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Conflict of interest

The authors have no conflicts of interest.

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