Research Paper

The Relationship Between Empowerment and Social Support Among Pregnant Afghan Women: A Cross-sectional Study in Kabul City, Afghanistan

Laila Alizada[1] , Seyedeh Fatemeh Vasegh Rahimparvar[2] , Seyed Ahmad SeyedAlinaghi[3] , Samira Noorzaie[2] , Omid Dadras[3, 4*]

1. Department of Reproductive Health, School of Nursing and Midwifery, Kabul University of Medical Sciences, Kabul, Afghanistan.
2. Department of Reproductive Health, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.
3. Iranian Research Center for HIV/AIDS (IRCHA), Tehran University of Medical Sciences, Tehran, Iran.
4. Excellent Center for Dengue and Community Public Health (EC for DACH), Walailak University, Nakhon Si Thammarat, Thailand.

ABSTRACT

Background and Purpose: Afghanistan experiences a significant maternal mortality rate, which could be mitigated through the empowerment of women and increased social support. This study aimed to explore the relationship between empowerment and social support among pregnant women seeking care at governmental hospitals in Kabul City, Afghanistan.

Materials and Methods: A cross-sectional study was conducted in 4 governmental hospitals in Kabul, Afghanistan, in 2020. Through a convenient sampling, 428 pregnant women were recruited. The Kameda empowerment (Cronbach $\alpha=0.89$) was used to measure woman empowerment. Sarason social support questionnaires with two subscales, including social support number (Cronbach $\alpha=0.95$) and social support satisfaction (Cronbach $\alpha=0.96$), were used to collect the study data. Then, the obtained data were analyzed using SPSS software, version 16, and the Pearson correlation test determined the association between variables at the significance level of $P<0.05$.

Results: The study participants' Mean±SD age was 26.55±5 years. Many were illiterate (28.3%), and more than half (79.7%) were homemakers. Almost two-thirds had no sources of income (71.3%). The Mean±SD gestational age was 32.16±5.04 weeks, and 77.6% of participants wanted their pregnancy. The Mean±SD score for empowerment from 428 research samples was 85.48±9.02, for social support number was 5.49±0.65 (which indicates the low number of people who support women), and for social support satisfaction was 1.5±0.43 (which indicates a low level of social support satisfaction). Empowerment had a positive significant relationship with social support satisfaction (r=0.157, P=0.01) and social support number (r=0.129, P=0.007).

Conclusion: Given the significant positive relationship between empowerment and social support in pregnant Afghan women, the low scores of social support call for more attention to the special needs of Afghan women to enhance the social safety net and improve social support, particularly among pregnant women, and eventually enhance the empowerment and reduce the maternal mortality rate among them.

Keywords: Empowerment, Social support, Self-efficacy, Pregnant women, Afghanistan

* Corresponding Author:
Omid Dadras
Address: Iranian Research Center for HIV/AIDS (IRCHA), Tehran University of Medical Sciences, Tehran, Iran.
Tel: +98 (911) 4058914
E-mail: omiddadras@yahoo.com

1. Introduction

Health neglect during pregnancy can have irreparable consequences for the mother and the unborn child. Inadequate prenatal care is the most prevailing cause of maternal mortality, especially in developing countries (1(. Poor prenatal care has been linked to several adverse pregnancy outcomes [1, 2]. About 529000 maternal deaths occur annually, of which 99% happen in developing countries. In Afghanistan, 396 maternal deaths occur per 100000 live births [3]. Although pregnancy may be an exceptionally delightful experience for most women, it is often believed to be a stressful time with many physiological and psychological transformations. These transformations might substantially impact the daily activities of pregnant women [4]. Potential risk factors for perinatal mental distress include older age, history of trauma, early marriage, absence of social support, low education, and marital status (single, separated, or widowed) [5].

Individual empowerment is identified by the World Health Organization (WHO) as an important factor in the quality of care through influencing decision-making and providing a supportive environment using an improved woman–provider relationship [6]. Empowering pregnant women is characterized as a sense of self-fulfillment and increased independence which is gained through interaction with the environment and other individuals that boosts the spontaneous psychological energy to achieve the desired pregnancy and childbirth [7]. Woman empowerment could substantially improve the use of prenatal care services and ensure maternal health. Moreover, pregnancy empowerment could enhance problem-solving skills [8]. Empowered women are more likely to use skilled birth attendants and undergo lower maternal mortality [9]. Women's empowerment affects women's health and benefits their families, children, and communities [10].

The social support concept refers to people we can rely on—individuals who care about, value, and love us [11]. Pregnancy is a critical period for women in which the need for social support is felt more than ever and requires special attention. The husband, a consultant, or a reliable family member or friend can provide social support before, during, and after pregnancy [12]. Generally, the most important sources of social support and available sources of support following childbirth are the support of family members and a woman's intimate partner [13]. Accessibility to social support, either received or perceived, is associated with better maternal outcomes, results in lower prenatal distress and better pregnancy outcomes [14]. Some adverse pregnancy outcomes, such as low birth weight, poor labor progress, preterm labor, neural tube defects, depression, and anxiety, appeared to be associated with lower social support [15]. Overall, the evidence shows that pregnant women with the support of family members, friends, and health professionals experience better outcomes experiences, so social support is a protective factor during pregnancy. Previous studies suggest a positive relationship between perceived social support and women's empowerment during pregnancy [16]. Women who reported higher levels of social support also demonstrated greater empowerment in various aspects of their lives, including decision-making and control over their health [16, 17]. However, the effect could vary across populations of diverse sociocultural norms and values, and further context-specific studies are warranted to determine the exact relationship between these two parameters in different populations.

Based on the earned experiences and knowledge in Afghanistan [2], low social support was documented among pregnant Afghan women who do not receive enough support from their spouses and family. However, this condition may be improved by or associated with pregnant women's empowerment. Thus, we hypothesized that social support could be enhanced through women's empowerment during pregnancy. To our knowledge, there was no such research in Afghanistan. This study investigated the level of empowerment and social support and their relationship in pregnant women visiting governmental hospitals in Kabul City, Afghanistan.

2. Materials and Methods

Study design and setting

A cross-sectional study was conducted among pregnant Afghan women attending 4 governmental hospitals (Malalai Zijanton Hospital, Rabia Blkhi Hospital, Isteqlal Hospital, 102 beds of Khair Khana Hospital) for prenatal visits or delivery in Kabul City, Afghanistan, in 2020.

Sample size calculation

The sample size was calculated to estimate the empowerment in pregnancy at the confidence level of 95%, with a power of 90%, assuming the correlational coefficient between empowerment and social support in each dimension, network, and satisfaction is 0.2. The formula for sample size calculation was retrieved from similar previous studies [7, 11, 18]. The estimated sample size was 428. The sample size in each hospital was allocated proportionality to the size of the corresponding hospital.

Considering α (two-tailed) = 0.05 (threshold probability for rejecting the null hypothesis, type I error rate), β=0.10 (probability of failing to reject the null hypothesis under the alternative hypothesis. Type II error rate), r=0.20 (the expected correlation coefficient), the standard normal deviate for α: Zα=1.9600, the standard normal deviate for β: Zβ=1.2816, and C= 0.5 * ln[(1+r)/(1-r)]=0.2027, the total sample size (N) equals 428 following this formula: [(Zα+Zβ)/C]2+3.

Participants recruitment

The sampling started on May 2, 2020, in 4 hospitals in Kabul that had maternity services. The consecutive convenient sampling method census sampling method was employed to recruit the participants. Following informed consent, the principal investigator collected the data using questionnaires [5, 8, 12] through face-to-face interview with the women who visited the hospitals mentioned above for perinatal care or delivery and met the inclusion criteria. The sampling ended on July 10, 2020, with 428 samples. All the women the interviewer approached were responsive, and there was no dropout before or during the interview.

Eligibility criteria

All the pregnant Afghan women with no underlying diseases at the 22nd gestational week or beyond and referred to Kabul governmental hospitals for perinatal care or delivery were recruited. Those with a husband who suffered from bitter experiences, such as losing loved ones or severe financial loss, were excluded during the last 6 months.

Measures and scales

The study questionnaire was developed by combining three parts as follows:

1. Demographic characteristics questions collecting data related to the age, education, and income of both women and their husbands as well as the number of children, gestational age, wanted pregnancy, and fetus gender.

2. The empowerment questionnaire of Kameda 2008 [7] was originally developed in English. The Cronbach α coefficient for the overall scale is 0.89. It comprised 27 questions grouped into 5 subscales: self-efficacy (6 items, Cronbach α=0.77), future image (6 items, Cronbach α=0.76), self-esteem (7 items, Cronbach α=0.80), support and assurance from others (4 items, Cronbach α=0.77), and Joy of an addition to the family (4 items, Cronbach α=0.67). Each item should be answered on a 4-point Likert scale ranging from strongly agree (4) to strongly disagree (1), and a minimum score of 27 and a maximum score of 108. The average score was used as the cut-off point to judge the level of empowerment. Therefore, a score above 67.5 indicates a good empowerment score. The Persian version of the questionnaire was translated by Leila Hajipour in 2016 with an overall Cronbach α of 0.89 and had acceptable reliability and validity. The Cronbach α coefficient for 5 subscales was as follows: self-efficacy (0.87), future image (0.82), self-esteem (0.80), support and assurance from others (0.82), and joy of an addition to the family (0.94) [4].

3. To assess the social support of pregnant women, the English version of the Social Support Questionnaire (SSQ) developed by Irwin G. Sarason in 1993 was used [11]. It includes 27 questions in two sections; the SSQ-number section (Cronbach α=0.90) asks the woman to list the utmost 9 people she knows, excluding herself, whom she could count on for help or support in the manner described, and the SSQ-satisfaction section (Cronbach α=0.83) in which the woman rates the level of satisfaction with the support she received from 1 (very dissatisfied) to 6 (very satisfied). The maximum number of people for 27 items was 243, divided by 27 per item score, yielding the SSQ number score. The maximum number of satisfaction scores for 27 items was 162, divided by 27 per item score, yielding the SSQ satisfaction score. The score obtained for the SSQ-N is between 1 to 9, and for SSQ-S is between 1 to 6 for each person, and the final score is the participants' mean score. This questionnaire was translated into Persian by Mahdi Ghasinoor in 2011 and had acceptable validity and reliability. The internal consistency for the translated version is 0.95 in the social support number section and 0.96 in the social support satisfaction section [19].

Data analysis

Data were analyzed using the SPSS software, version 25 (IBM SPSS Statistics). Descriptive statistics, including means, frequencies, and percentages were calculated to describe the participants' characteristics. Since the data distribution was normal based on the Kolmogorov-Smirnov (KS) test, correlations between variables were tested using the Pearson correlation coefficient at a significance level of P<0.05.

3. Results

Participants' characteristics

Table 1 shows that the Mean±SD age for study participants and their husbands were 26.55±5 and 30.72±6.3 years, respectively. Most women were illiterate (28.3%),

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Table 1. Participants' demographic characteristics, Kabul City, Afghanistan, 2020

Demographic Variables of Pregnant Women		No. (%)/Mean±SD
Age (y)	18-25	188(43.9)
	25-40	235(54.9)
	40-55	5(1.2)
		26.55±5.85
Education	Illiterate	121(28.3)
	Primary education	108(25.2)
	12 passes	66(15.4)
	14 passes	23(5.4)
	BA or BS	92(21.5)
	MA or MS	16(3.7)
	PhD	2(0.5)
Fetus gender	Boy	156(36.4)
	Girl	132(30.8)
	Don't know	140(32.7)
Wanted pregnancy	Yes	332(77.6)
	No	90(21.0)
	Don't know	6(1.4)
Job	Household	344(80.4)
	Employed	84(19.6)
Personal income (monthly)	Does not have	305(71.3)
	<10000 Afghanis	36(8.4)
	10000 – 30000 Afghanis	47(11.0)
	30000 – 50000 Afghanis	28(6.5)
	> 50000 Afghanis	12(2.8)
Number of children	0	18(4.2)
	1	119(27.8)
	2	124(29.0)
	3	73(17.1)
	4	51(11.9)
	5 and more	43(10.0)
		2.46±1.66

Demographic Variables of Pregnant Women		No. (%)/Mean±SD
Gestational age (week)	22-24	20(4.7)
	25-28	111(25.8)
	29-32	110(25.7)
	33-36	77((18.0)
	37-40	110(25.7)
		32.16±5.04
Husband's education	Illiterate	47(11.0)
	Primary education	99(23.1)
	12 passes	47(11.0)
	14 passes	17(4.0)
	BA or BS	148(34.6)
	MA or MS	60(14.0)
	PhD	10(2.3)
Husband's age (y)	18 – 25	39(9.1)
	25 – 40	351(82.0)
	40 – 55	31(7.2)
	> 55	7(1.6)
		30.72±6.3

and most husbands had primary education (23.1%). More than half of the women (79.7%) were homemakers. Considering economic status, almost two-thirds of the study participants had no income sources (71.3%). The mean number of children was 2.46±1.66. The Mean±SD gestational age was 32.16±5.04 weeks, and most study participants (77.6%) wanted their pregnancy. Finally, about 36.4% of the fetuses were male.

The mean scores of women's empowerment and social support

Table 2 presents the total scores for empowerment and its dimensions. The Mean±SD score of empowerment was 85.48±9.02. In terms of the empowerment dimensions, the Mean±SD scores for self-efficacy, future image, self-esteem, support and assurance from others, and joy of an addition to the family were 19.87±3.33, 17.63±2.59, 20.88±2.81, 14.24±2.12, and 12.87±2.69, respectively. The Mean±SD score for the number was 5.49±0.65, and the mean score for social support satisfaction was 1.5±0.43.

The relationship between women's empowerment and social support

The results indicated a significant positive relationship between the total empowerment score with SSQ-satisfaction (SSQS) (r=0.16, P=0.001) and SSQ-number (SSQN) (r=0.13, P=0.007). In terms of empowerment dimensions, self-efficacy (r=0.14, P=0.004), future image (r=0.16, P=0.001), and support and assurance (r=0.13, P=0.006) were positively correlated with the SSQN. Moreover, self-efficacy (r=0.26, P=0.001), future image (r=0.15, P=0.001), and support and assurance (r=0.20, P=0.001) dimensions of empowerment were positively correlated with the SSQS; whereas, the self-esteem (r=0.10, P=0.032) was negatively associated with the SSQS (Table 3).

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Table 2. Pregnant Afghan women empowerment and social support scores, Kabul City, Afghanistan, 2020

Variable	Subscales	Min	Max	Mean±SD
Women empowerment	Self- efficacy	6	24	19.87±3.33
	Future image	13	24	17.63±2.59
	Self-esteem	9	28	20.88±2.81
	Support/assurance from others	4	16	14.24±2.12
	The joy of an addition to the family	4	16	12.87±2.69
	Total	38	106	85.48±9.02
Social support	SSQN	1.93	6	5.49±0.65
	SSQS	0.67	3	1.50±0.43

Abbreviations: SSQN: social support questionnaire number; SSQS: social support questionnaire satisfaction

4. Discussion

Summary of findings

The study results indicate that total empowerment has a positive statistically significant relationship with the SSQS (P=0.001) and SSQN (P=0.007). Self-efficacy (P=0.004), future image (P=0.001), and support and assurance (P=0.006) dimensions of the empowerment questionnaire have a positive statistically significant correlation with the SSQN. Also, self-efficacy (P=0.000), future image (P=0.001), self-esteem (P= 0.032), and support and assurance (P=0.000) dimensions of the empowerment questionnaire have a positive statistically significant correlation with the SSQS.

Women's empowerment among pregnant Afghan women

In a similar study with the same instrument by Hajipour et al. in Iran, the Mean±SD score for total empowerment of pregnant women was 78.7±6.7, slightly lower than the total empowerment score in the present study (85.48±9.02). In addition, the Mean±SD scores for self-efficacy, future image, self-esteem, support and assurance from others, and joy of an addition to the family were 17.9±2.8, 15.3±1.9, 19.2±1.8, 12.7±1.6, and 13.7±1.8, respectively [4] which were slightly lower than the average scores in our study. Likewise, a similar study by Borghei et al. [20] in Iran reported a total Mean±SD empowerment score of 81.78±8.16 and the mean score of self-efficacy was 17.59±2.51, self-esteem 21.71±2.75, future image 16.68±2.15, support and assurance from others 12.37±1.61, and joy of an addition to the family 13.40±1.79. They were lower than our study results.

This result could be due to the differences in sample characteristics and study setting.

In another study using different tools, the total empowerment Mean±SD score was 90.76±14.53 among pregnant Iranian women, which was favorable. Despite the similar findings in our study, the result is not comparable due to the different scales used. The authors used a 32-item empowerment questionnaire which includes three areas of socio-political, educational, and mental in this study [21]. However, similar to Iranian pregnant women, the favorable scores for empowerment among the pregnant Afghan women in the current study could be attributed to the ulterior perceived problem-solving abilities of pregnant women visiting Kabul public hospitals.

Social Support among pregnant Afghan women

In the study of Sarmasti et al., the researchers compared the social support between healthy pregnant women with women who suffered from preeclampsia in Iran. This study used a perceived social support questionnaire (PSS-Q), which differs from the present research. The Mean±SD score for perceived social support in healthy pregnant women based on the used social support questionnaire was 76.80±7.6 [22]. Based on the previous researchers' experiences in Afghanistan, a country whose people have been constantly at war and living in poverty, the social support of women by men during pregnancy is not a norm. In addition, social support by other individuals or organizations in Afghan society is low due to longstanding poverty and insecurity [2, 23].

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Table 3. Indicators of empowerment dimensions against social support variable, Kabul City, Afghanistan

Variable		SSQS	SSQN
Self-efficacy	The Pearson correlation	0.263[**]	0.140[**]
	Sig. (2-tailed)	0.000	0.004
	N	428	428
Future image	The Pearson correlation	0.154[**]	0.157[**]
	Sig. (2-tailed)	0.001	0.001
	N	428	428
Self-esteem	The Pearson correlation	-0.104[*]	- 0.052
	Sig. (2-tailed)	0.032	0.280
	N	428	428
Support and assurance from others	The Pearson correlation	0.201[**]	0.134[**]
	Sig. (2-tailed)	0.000	0.006
	N	424	424
The joy of an addition to the family	The Pearson correlation	0.007	0.058
	Sig. (2-tailed)	0.879	0.232
	N	428	428
Total empowerment	The Pearson correlation	0.157[**]	0.129[**]
	Sig. (2-tailed)	0.001	0.007
	N	428	428

Abbreviations: SSQN: social support questionnaire number; SSQS: social support questionnaire satisfaction

[**]Correlation is significant at the 0.01 level (2-tailed).

[*] Correlation is significant at the 0.05 level (2-tailed).

Relationship between women's empowerment and social support

The positive relationship between empowerment and social support in the present study was also documented in similar studies. In a study by Gao et al. in China, perceived social support was positively correlated with parenting self-efficacy [24]. This study differs from the present study in terms of the tools used. This study used the Parenting Sense of Competence Scale (PSOC) to measure self-efficacy and the Perceived Social Support Scale (PSSS) to measure social support score.

In another study in the USA, a positive relationship between social support and parenting self-efficacy (r=0.223, P<0.05) and family empowerment and social support (r=0.256, P<0.05) [25] was reported; however, this study used different scales including the PSOC for assessing the self-efficacy, the family empowerment scale for assessing the competency, and the maternal social support index for assessing the perceived social support.

Although the social support, empowerment, and self-efficacy questionnaires used in this study differed from our questionnaires, there was a significant positive relationship between social support and self-efficacy in both studies. Likewise, in Yuksel et al. study, there was a weak positive correlation between self-efficacy scores and perceived social support scores (P<0.05) [26] which was similar to our research.

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Strengths and weaknesses

Although it was the first study examining the level of empowerment and social support and their relationship among pregnant Afghan women in Afghanistan, some limitations must be considered in interpreting the results. First, we recruited the women who had access to and visited the public hospitals for perinatal care or delivery and inevitably excluded those who have not access to such facilities and services in whom the rate of perinatal complications might be much higher [27] and the social support and empowerment could be much lower [20]. Therefore, our sample do not represent all pregnant women in Afghanistan, and women's empowerment and social support may be overestimated in this investigation. However, it was an obligatory drawback that we accepted as the logistical and security concerns did not allow us to achieve the goal of recruiting a representative sample. Second, as most women were accompanied by their close relatives, the bias that socially desirable responses may introduce could overestimate the level of women empowerment and social support in our sample and raise concern about the validity of the results. However, we tried to reduce this bias by interviewing the participants in a confidential environment where only the interviewer and the participant were present, even though it was not possible in some cases when the participants or their companions insisted on being present at the time of the interview.

5. Conclusions

Besides the favorable level of women empowerment among the participants of the present research, an important finding was the significant positive relationship between empowerment and social support in pregnant Afghan women. Therefore, improving the social support and safety net for pregnant women in Afghanistan could enhance the empowerment of pregnant Afghan women and ensure maternal and child health among this vulnerable population. Further qualitative research is recommended to explore the sociocultural barriers hindering women's empowerment and limiting social support for Afghan women.

Study limitations

One of the limitations of this study that reduce the generalizability of the findings is no data on the small group of pregnant women who had delivered at home and were unreachable in Kabul. The other limitation was data collecting at only governmental hospitals due to the difficulties in access to regional private and community clinics, which may reduce the generalizability of the results.

Ethical Considerations

Compliance with ethical guidelines

The protocol of this study was reviewed and approved by the Ethics Committee of the School of Nursing, Midwifery, and Rehabilitation, Tehran University of Medical Sciences, International Campus (TUMS-IC) in 2020. Informed written consent was obtained from all participants. Confidentiality was assured by anonymous data collection with no personal identifier. Participation was voluntary, and the right to withdraw at any time during the study was granted to all participants. Permission from maternity management of each hospital was granted.

This study adhered to the Declaration of Helsinki as a statement of ethical principles for medical research involving human subjects, including research on identifiable human material and data.

this research project. We also appreciate the cooperation and support received from governmental hospitals in Kabul, Afghanistan, namely Malalai Zijanton Hospital, Rabia Blkhi Hospital, Isteqlal Hospital, and the 102 beds of Khair Khana Hospital.

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