

## The impact of education using Health Belief Model on awareness and attitude of male teachers regarding their participation in family planning

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### Abstract:

#### Introduction:

Considering the population boom and its deleterious effects on different sections of societies, as well as the minimal role of men in family planning programs, we conducted the present study to investigate the impact of education using Health Belief Model (HBM) on awareness and attitude of male teachers of Marvdasht regarding their participation in family planning programs.

#### Material and Methods:

This is a quasi-experimental study with pretest-posttest. Using randomized cluster sampling, we selected 90 male teachers of Marvdasht. The participants were evaluated using a questionnaire based on health belief model prior to and following the educational program. Education consisted of providing an educational pamphlet and question and answer sessions. Data were analyzed using paired t-test, chi-square, Spearman and Pearson's correlation coefficient.

#### Results:

Our findings indicate a significant difference between awareness and attitude scores before and after education ( $P < 0.001$ ). We also calculated the correlation coefficient between individuals' awareness and attitude scores and background variables such as age, spouse age, number of children, and spouse occupation and education.

#### Conclusion:

Education aimed at improving men's participation in family planning may enhance the individuals' awareness and attitude, thus contributing to family health. We recommend the provision of appropriate educational programs specific for men.

**Keywords:** Education, Health Belief Model, Awareness, Attitude, Family Planning

#### Introduction:

Due to the impact of population growth on quality of healthcare service, education, welfare, immigration and other socioeconomic issues, governments in different countries put in place various rules

and regulations to modify population elements. The overall policy observed in all population strategies focuses on establishing a balance between population and the available resources (1). In the Islamic Republic of Iran, population policies have

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been implemented in two phases, spanning from 1984 to 1988, and from 1988 onwards (2).

According to studies by John Hopkins University, extensive use of family planning programs in developing countries may save some 58 million lives annually. It is estimated that currently 10.5 million children and 450 thousand mothers expire in developing countries (3).

Furthermore, one woman dies every minute in the world as a result of pregnancy or its associated complications. In addition, some 80 million women encounter unwanted or unplanned pregnancy every year, among which 20 million are at risk of miscarriage, and 68000 expire (4). Since a large number of pregnancies impacts women's health, it is essential to control the number of pregnancies and ensure appropriate intervals between pregnancies in order to protect women's health and mental health of other family members. Evidently, realization of these programs requires men's involvement in family planning. Since decision of pregnancy impacts both parties in a couple, men and women should both be included in decision making regarding contraceptive use (5). Men's involvement in reproductive health has two major aspects:

- \* What demonstrate that a man accepts and acts according to his wife's needs, beliefs and rights regarding reproductive health

- \* What pertains to his own sexual health and healthy behavior (6)

Previous studies report different reasons for men's objection or neglect of reproductive health, such as fear of loss of authority, concerns of spousal infidelity, religious concerns, fear of complications of contraceptive measures and many other examples of ignorance (6). These all indicate incorrect beliefs or ignorance which require appropriate education. Cognitive parameters play a pivotal role in shaping health behaviors (7). The Health Belief

Model (HBM) has been used extensively to assess health-related beliefs regarding protective behaviors. It is a cognitive model attempting to identify patterns of health behaviors (8). According to this model, acting on a health belief is influenced by six general concepts of perceived susceptibility or the risk of developing a disease, perceived threats or severity of a disease, perceived benefits resulting from a health behavior, perceived barriers hindering a health behavior, the individual's overall motivation for health, and finally the individual's self-confidence in adapting a health behavior (9).

Men, particularly in traditional societies, assume the role of ultimate authority in their families; thus, adopting correct decisions regarding the number of children, interval between pregnancies, and use of contraceptive measures, will not be feasible without their sufficient awareness, correct attitude and active participation. It is obvious that educating men in order to improve their awareness and attitude will modify their lifestyle and behaviors, thus contributing to family planning and reproductive health programs (10).

Since teachers play a crucial role in advocating health teachings, both to their families and the entire society, improving their health awareness and positive beliefs regarding health behaviors will contribute to society's health. Therefore, we selected this group for evaluation of their awareness and attitude, as well as educating them about family planning and reproductive health.

### **Material and Methods:**

This is a pretest-posttest quasi-experimental study aimed at assessing the impact of education through Health Belief Model on teachers' awareness and attitude regarding their involvement in family planning programs in spring 2008. In this study, we

evaluated the participants' awareness and attitude before and after education.

Our study population consisted of all teachers employed in elementary, middle and high schools of Marvdasht. Using the results of previous studies and current limitations, as well as the sample size equation with a confidence interval of 95%, we determined 90 participants as our sample size. The exclusion criteria were celibacy and the individual's lack of consent for participation in the study.

Data were collected using a questionnaire developed by the authors, consisting of demographic questions, 18 questions pertaining to awareness and 15 questions pertaining to attitude, based on HBM and previous similar studies. In order to determine the questionnaire's validity and reliability, we used content validity and test re-test ( $r=0.85$ ), respectively.

For sampling, we considered each school in Marvdasht as one cluster. After random selection of samples, the objectives and conditions of the study were explained to them. Each teacher willing to participate was assigned an identification code to be

mentioned on top of the questionnaire. On pretest, the study units completed the questionnaires and preliminary data were collected. Subsequently, education, consisting of educational materials prepared in accordance with the objective of the study and the HBM, were provided to participants in pamphlets and question and answer sessions. After three weeks, the participants completed the questionnaires again and final evaluation was made. All questions were scored equally; based on the scores achieved, the participants were categorized as Poor (scoring under 50% of total score), Average (scoring 50%-70% of total score), and Good (scoring over 70% of total score). P values  $< 0.01$  were considered significant.

### Results:

The participants were aged 29-59 years, with a mean age of 40.4 and standard deviation of 17.6 years. The mean number of children was 3 and all participants had bachelor's degree. Table 1 presents the participants' awareness and attitude scores before and after education.

Table 1: Categorization of study units in Poor, Average and Good groups before and after education

Category	Awareness		Attitude		Perceived Threats		Perceived Barriers		Perceived Benefits	
	Before Education	After Education	Before Education	After Education	Before Education	After Education	Before Education	After Education	Before Education	After Education
Poor	66.7	41.1	67.8	50	66.7	51.1	88.9	61.1	68.9	52.3
Average	22.2	37.8	25.6	34.4	20	31.1	10	31.1	26.7	34.4
Good	11.1	21.1	6.7	0.6	13.3	17.8	1.1	0.8	4.4	12.2

The mean awareness scores before and after education were  $45.9 \pm 20.38$  and  $58.6 \pm 18.76$ , respectively. Paired t-test indicated a significant difference between awareness scores before and after education ( $t=-15.86$ ,  $p<0.001$ ).

The mean attitude scores before and after education were  $42.66 \pm 18.30$  and  $52.38 \pm 18.56$ , respectively. Paired t-test indicated a significant difference between attitude scores before and after education ( $t=-9.6$ ,  $p<0.001$ ).

The mean perceived threats scores before and after education were  $45.38 \pm 23.06$  and  $53.27 \pm 21.21$ , respectively. Paired t-test indicated a significant difference between perceived threats scores before and after education ( $t=-5.83$ ,  $p<0.001$ ).

The mean perceived benefits scores before and after education were  $45.55 \pm 18.92$  and  $57.54 \pm 21.89$ , respectively. Paired t-test indicated a significant difference between perceived benefits scores before and after education ( $t=-2.75$ ,  $p<0.001$ ).

The mean perceived barriers scores before and after education were  $31.52 \pm 20.96$  and  $48.88 \pm 21.74$ , respectively. Paired t-test indicated a significant difference between

attitude scores before and after education ( $t=-9.44$ ,  $p<0.001$ ). The correlations between awareness and perception scores were as follows:

Table 2: Correlation between perceptions and awareness of study units before education

	Perceived Threats	Perceived Benefits	Perceived Barriers
Awareness	$r=0.744$	$r=0.675$	$r=0.627$
Perceived Threats	---	---	$r=0.446$
Perceived Benefits	$r=0.580$	---	---
Perceived Barriers	---	$r=0.685$	---

Table 3: Correlation between perceptions and awareness of study units after education

	Perceived Threats	Perceived Benefits	Perceived Barriers
Awareness	$r=0.858$ $p<0.001$	$r=0.336$ $p<0.001$	$r=0.731$ $p<0.001$
Perceived Threats	---	---	$r=0.736$ $p<0.001$
Perceived Benefits	$r=0.261$ $p=0.013$	---	---
Perceived Barriers	---	$r=0.241$ $p=0.022$	---

Table 2 indicates a direct relationship between individuals' perceptions and awareness prior to education. Table 3 indicates a direct relationship between individuals' perceptions and awareness following education.

Investigating the correlation of teachers' attitude with background variables indicated a relatively strong indirect relationship with age ( $r=-0.415$ ,  $p<0.001$ ), an inverse relationship with spouse age ( $r=-0.38$ ,  $p<0.001$ ), a direct relationship with spouse education ( $r=0.692$ ,  $p<0.001$ ), and an inverse relationship with number of children ( $r=-0.478$ ,  $p<0.001$ ). It must be noted that the relationship between awareness and background variables is similar to the relationship with attitude scores.

### Conclusion:

According to the data presented in Table 1, as well as the results of paired t-test between mean awareness scores of participants, it may be concluded that education improves people's awareness about participation in

family planning programs ( $r=-15.86$ ,  $p<0.001$ ). Similarly, Shafie reported that education improves health-related awareness (11). Similar studies by Hoseini Jabeli in 1995 in Tarbiat Modarres University, Tavosi Nikabadi in 2004, and Jamali et al. in 1998 in Nigeria reported improvement in awareness scores following education (12-14). These findings are corroborated by our results.

Regarding the impact of education on people's attitude, the findings in Table 1 and the results of paired t-test between attitude scores before and after education indicate that the individuals' attitude towards participation in family planning programs improved following education ( $r=-9.6$ ,  $p<0.001$ ). A study by Abbas Zadeh in 1996 on workers in Bella and Melli shoe industry indicated that education improved awareness in workers (15). Chikara conducted a study in 1990 to conclude that education via media improves people's attitude and awareness (16).

Regarding the elements of health belief model and the impact of education on them, data in Table 1 and the results of paired t-test between before and after scores of perceived threats ( $r=-5.83$ ,  $p<0.001$ ), perceived benefits ( $r=-2.75$ ,  $p<0.007$ ), and perceived barriers ( $r=-9.44$ ,  $p<0.001$ ) reveal that education improves the individuals' perceptions about participation in family planning programs. Similarly, Ebrahimi reported that education impacts the elements of health belief model (17).

As depicted in Tables 2 and 3, we found a direct correlation between awareness and perceptions of participants. In other words,

people with higher awareness have better perceptions regarding their participation in family planning programs, which is consistent with findings of Ebrahimi (17).

According to the findings of the present study as well as those of similar studies using the Health Belief Model (18), it may be concluded that education eliminates incorrect beliefs and promotes positive attitude and awareness in trainees. Therefore, we recommend the development and provision of educational programs intended specifically for men in family planning centers.

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