






Multi-Theory Model (MTM) and change in childbearing behavior: A perspective

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Abstract

The total fertility rate has declined in certain countries, dropping below the replacement level. The attitudes and desires of some families regarding having children have also shifted. To cultivate positive societal views on childbearing, there is a need for updated educational initiatives, such as a multi-theory model. Although the multi-theory model has been used in various contexts to facilitate health behavior change, with its effectiveness validated in predicting and influencing behaviors, there has been no documented use of this model in the context of fertility, either in Iran or globally. Developing fertility encouragement programs requires cultural sensitivity and attention to accepted social norms and customs, which can enhance program efficacy. We believe the Multi-Theory Model can be effective and useful in encouraging couples to increase fertility.

Introduction

In recent decades, some countries have witnessed a significant decline in fertility rates, raising concerns about population aging (1). Attitudes toward childbearing are influenced by various factors, and positive beliefs play a crucial role in timely childbirth (2). Updated educational interventions tailored to societal needs are necessary to foster positive attitudes toward childbearing (3).

Models and theories in health education and health promotion serve as guides for educational activities aimed at changing behavior (4). Implementing behavioral models can also effectively encourage couples to pursue childbearing and adopt effective parenting practices (5). One of the most commonly used models in health education is the Health Belief Model. This model offers insights into health behavior changes and can support fertility counseling and family planning efforts (6).

The Theory of Planned Behavior is another significant health education model for understanding fertility intentions (7). According to this model, behavioral intention is the primary determinant of behavior, influenced by attitudes, subjective norms, and perceived behavioral control (2). Fertility decisions are shaped by both individual and environmental factors, as fertility behavior is inherently social (8). The socio-cognitive perspective, as proposed by Bandura's Social Cognitive Theory, emphasizes the role of observation, imitation, and modeling in shaping behavior (9). This theory considers individual factors like attitudes, motivations, and self-efficacy, alongside environmental influences, in predicting social behaviors, including decisions related to childbearing (10). In addition, various other factors affect childbearing behavior, such as economic, social, cultural, and environmental influences, all of which play an essential role in determining actual fertility outcomes (11).

In health education and promotion, an ideal behavior change theory should focus specifically on health behaviors, possess strong predictive capabilities, and be cost-effective, adaptable, and applicable across various levels. The Multi-Theory Model (MTM) of health behavior change emerges as a promising approach, integrating cognitive, volitional, and environmental components, and drawing from empirical evidence. It is effective across different levels and cultures, including in resource-limited settings, and has two components: "initiation of behavior" and "sustaining behavior."

The three main concepts in this model related to the initiation phase of behavior change are participatory dialogue, behavioral confidence, and changes in the physical environment. The maintenance of behavior involves concepts such as emotional transformation (Turning feelings into behavior change goals), practice for change (Developing new habits that support health behavior change), and changes in the social environment (Social support to help sustain health behavior change) (12).

Key concepts of this model focus on behavior change initiation. The first construct, "participatory dialogue," adapted from Freire's model, emphasizes mutual engagement in understanding the advantages and disadvantages of a behavior change. For fertility-related behaviors, this involves convincing couples of the benefits of childbearing. The second construct, "behavioral confidence," considers both internal and external influences on confidence. For fertility-

related behaviors, this would enhance the couple's capability for child-rearing. The third construct "changes in the physical environment," targets resource accessibility. For this construct, governmental and organizational incentives for raising children may be useful (13).

"Emotional transformation," "practicing for change," and "social environmental changes" are emphasized for sustaining behavior change. Emotional intelligence supports emotional transformation, Freire's model guides practicing for change, and social support theories inform changes in the social environment. For emotional transformation in fertility-related behaviors, the couple's feelings toward child-rearing should be converted into actionable goals. Likewise, couples should engage in behaviors that facilitate pregnancy to operationalize the concept of practicing for change. Finally, changes in the social environment can be fostered through support from friends and family for child-rearing (14,15).

The MTM integrates insights from various behavioral theories, making it applicable at different levels, particularly in resource-limited settings (14). This model has been applied in various studies, including an intervention aimed at enhancing the quality of life for menopausal women, which resulted in an improvement in their quality of life (16); a successful intervention for increasing physical activity and reducing waist circumference (17); an educational intervention for reducing water pipe smoking (18); a counseling and follow-up intervention led by an expert for smoking cessation (19); and a cross-sectional study in the USA demonstrating the model's effectiveness in predicting the initiation and maintenance of dental floss usage (20). Additionally, its positive impact has been shown in promoting a suitable dietary regimen and weight reduction in a clinical trial (21). The model could also be effectively adapted for fertility-related behaviors.

Having children is a form of investment that involves costs, benefits, and risks, particularly for the mother. According to studies, some health education models have been applied in the field of fertility. However, the MTM has only been explored in a limited number of qualitative (22,23), cross-sectional (24,25), and intervention (18) studies in various other fields, which confirm the efficacy of the MTM in prediction and behavior change. Nevertheless, based on searches conducted in the fertility field, this model has not been applied in the context of fertility either in Iran or globally. There is potential for the applicability of the MTM in fertility-related behaviors, which needs to be explored through qualitative, cross-sectional, and experimental study designs.

Given the seriousness of the population decline issue in Iran and the necessity of encouraging couples to change their behavior toward fertility, it is recommended to utilize behavior change models in health education and promotion. In studies related to fertility, preventing delays in conception, and encouraging couples to increase the number of children, it is essential to evaluate the theoretical capabilities and frameworks of health education and promotion. In addition, the effectiveness of interventions based on these models should be more rigorously assessed. Due to the novelty of the MTM and its constructs, using this model to encourage fertility among couples may be appropriate, and its implementation is recommended.

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Conflicts of interest

The authors declare no conflicts of interest.

Author contributions

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