



# The relationship between maternal health literacy with physical activity self-efficacy in postpartum women

Masoumeh Masoumy<sup>1\*</sup>, Soudabeh Hamed-Shahraki<sup>2</sup>, Fatemeh Zeraatpishe<sup>3</sup>

<sup>1</sup>Department of Operation Room, Faculty of Allied Medical Sciences, Bushehr University of Medical Sciences, Bushehr, Iran

<sup>2</sup>Department of Epidemiology and Biostatistics, Faculty of Public Health, Zabol University of Medical Sciences, Zabol, Iran

<sup>3</sup>Department of Operation Room, Faculty of Allied Medical Sciences, Fasa University of Medical Science, Fasa, Iran

## Abstract

**Background and aims:** For women of reproductive age, postpartum weight retention can increase the risk of obesity and its associated health risks in women. Adequate health literacy can improve women's self-efficacy regarding their ability to adhere to physical activity postpartum. The study aimed to determine the relationship between health literacy and physical self-efficacy in postpartum women referred to comprehensive health service centers in Bushehr city.

**Methods:** This cross-sectional study (descriptive-analytical) was performed on 130 women with children under three months, referring to comprehensive health service centers in Bushehr city. Subjects were selected using a multi-stage cluster random sampling method of 10 comprehensive health service centers in Bushehr city. The required data were collected using the Maternal Health Literacy and Pregnancy Outcome Questionnaire (MHLAPQ) and the Physical Self-efficacy Questionnaire. Descriptive statistics, ANOVA, independent t-test, and Pearson correlation were applied to analyze the data using SPSS 20. The level of statistical significance was  $P$  value  $< 0.05$ .

**Results:** The mean score for maternal health literacy was  $51.17 \pm 5.53$ , so the lowest score was 14, and the highest was 56. A positive and significant correlation existed between maternal health literacy and physical activity self-efficacy ( $r = 0.196$ ,  $P < 0.05$ ). Significant relationships were found between maternal health literacy and physical self-efficacy postpartum with educational level and job mothers ( $P < 0.05$ ).

**Conclusion:** Considering the relationship between health literacy and increasing physical activity self-efficacy and improving postpartum weight management, training workshops for promoting health literacy and consequently self-efficacy and physical activity in health centers should be developed.

**Keywords:** Physical activity, Health literacy, Self-efficacy, Postpartum women

## \*Corresponding Author:

Masoumeh Masoumy,  
Email: [Masoumy@yahoo.com](mailto:Masoumy@yahoo.com)

**Received:** January 8, 2024

**Accepted:** March 11, 2024

**ePublished:** March 15, 2024

## Introduction

Pregnancy and childbirth lead to an increase in postpartum weight between 0.4 and 1.8 kg according to the age of each person (1). A healthy lifestyle is an effective way to improve women's health and reduce obesity postpartum (2). Regular physical activity in all phases of life improves physical well-being and lowers the risk of contracting non-communicable diseases (3). Postpartum physical activity is a determining factor for the health of mothers after childbirth (4). Postpartum physical activity is related to reducing depression and anxiety, sleep disorders, prevention and treatment of urinary retention, reducing the possibility of obesity after delivery (5), reduction in excessive weight gain/retention, insulin sensitivity, maintenance of bone mineral density, and enhanced psychological well-being (6). The findings of the Roozbahani et al study showed that 14% of mothers did some kind of sports activity. In this study, the physical activity of mothers postpartum was 38 minutes of doing

work, 15 minutes of going from place to place using a bicycle or walking, and only 5 minutes of physical activity per day (7).

Women lack physical activity because after giving birth, they have many responsibilities towards their families and those around them. Their main concern is taking care of the child, and their own health is the next priority. Postpartum mothers face many obstacles, such as lack of social support, energy and motivation, and financial problems to lead a healthy lifestyle. However, high self-efficacy is associated with health-promoting protective behaviors such as regular physical activity, healthy eating, and weight control (8).

Self-efficacy may be influential in women's decision to do physical activity. Self-efficacy is the feeling of confidence and belief in people's ability to do a task or a behavior (9). The level of individual self-efficacy of a woman after giving birth to physical activity determines what kind of activities she will try, how much effort she

will spend, and how much she will insist on having an active lifestyle (6). The concept of physical activity self-efficacy is defined as the confidence of an individual overcoming obstacles to physical activity. It is crucial in establishing and maintaining new healthy behaviors (10). The results of a study have shown that women with high self-efficacy are more willing to pursue an activity despite difficulties than women with lower self-efficacy (11). Women with low physical activity self-efficacy are easily convinced that their behavior is useless when faced with problems and quickly stop trying. At the same time, people who have high self-efficacy remove obstacles by improving self-management skills and perseverance and stand against problems (5). Inadequate knowledge about a specific health issue due to inadequate health literacy may affect people's self-efficacy regarding their ability to adhere to a self-care plan (5).

Maternal health literacy is essential in a woman's ability to engage in activities that improve her and her child's health. Maternal health literacy is a cognitive and social skill that shows the motivation and ability of women to properly access, understand, and use information to maintain the health of themselves and their children (12). Maternal health literacy is the most cost-effective strategy for reducing maternal mortality, morbidity, and complications before and after childbirth (13). Also, the health status of a woman, her understanding of health information, and, in fact, her health literacy before, during, and after pregnancy and during the years of growth and development directly affect the child (14).

Despite the great importance of health literacy in the quality of life and improving the health of mothers, it is said that its insufficient levels are associated with adverse health consequences for women (15). One of these adverse consequences in the critical postpartum period may be inactivity after giving birth. Research that has investigated the relationship between health literacy and self-care behaviors and self-efficacy of individuals has shown that health literacy has a positive effect on improving self-management behaviors and self-efficacy of individuals. So, the Peyman and Abdollahi's study showed that women with sufficient health literacy had significantly higher physical activity self-efficacy (11).

Considering that one of the dimensions of lifestyle is doing physical activity and exercise, health literacy affects lifestyle, and some studies show that people with sufficient health literacy have a healthy lifestyle. Therefore, the positive consequences of health literacy on lifestyle have attracted the attention of officials and policymakers in Iran's health system. Health literacy and a healthy lifestyle are among the priorities of the Ministry of Health of Iran. In the vision plan of Iran Health Education and Promotion Office 1404, the first priority is increasing health literacy, and the second is a healthy lifestyle (16).

Therefore, considering women as one of the vulnerable groups, the need to be aware of the relationship between health literacy and physical activity self-efficacy in

postpartum women allows for the possibility of designing appropriate and effective interventions such as education.

Despite the importance of women's health literacy and physical activity in their own, their child's, and society's health, as well as the limited number of studies conducted in this field in Iran, as well as the lack of a study to investigate the relationship between health literacy and physical activity self-efficacy in postpartum women in Bushehr, this study aims to investigate the relationship between health literacy and physical activity self-efficacy in postpartum women in Bushehr city. The results of this study will help researchers and health workers to have more effective behavioral interventions to improve health literacy and physical activity in postpartum women and thus reduce pregnancy-related overweight and obesity-related health risks.

## Methods

This cross-sectional study (descriptive-analytical) was conducted in 2019 on 130 mothers with children under three months old in 10 comprehensive health service centers in Bushehr city. The sample size was determined by 130 samples based on similar texts and with a confidence factor of 95% and an error of 1.3, based on the formula of  $n = \frac{Z^2 \cdot p \cdot q}{d^2}$ . The whole city of Bushehr consists of 10 comprehensive health service centers. A multi-stage cluster sampling method was used to select the sample. In such a way that at the beginning, five centers were randomly selected among the urban centers of comprehensive health services, and 26 women were randomly selected from each center. By referring to each of the comprehensive health service centers and assessing the family files, the mothers who gave birth who met the conditions for participating in the study and did not refer to other comprehensive health service centers were randomly selected and requested by phone if they asked to come at a particular time to complete the questionnaire. After obtaining the necessary permission from the ethics committee of Bushehr University of Medical Sciences and before completing the questionnaire, all participants were given sufficient information about the nature of the research, and informed consent was obtained from all of them. After obtaining informed consent, data was collected from mothers who were referred to comprehensive health service centers between September and December 2019. The inclusion criteria included mothers aged 18-35 years, having a 40-day-to-three-month-old baby and a singleton, living with their husband, and not having postpartum depression according to the participant's statement, and the exclusion criteria included withdrawing from participating in the research and women who were unable to do physical activity for any reason.

Data collection tools are the Maternal Health Literacy Questionnaire and Pregnancy Outcome (MHLAPQ) and Physical Activity Self-efficacy Questionnaire. The maternal health literacy questionnaire had two sections (17) which includes demographic information and the

level of maternal health literacy. In the demographic information questionnaire, questions about the mother's age, mother's education level, mother's occupation, family income level, number of pregnancies, and history of abortion were asked of each mother. Each mother answered each item as strongly agree, agree, disagree, and strongly disagree. The validity and reliability of the questionnaire were confirmed in the study by Kharazi et al (17). Therefore, Cronbach's alpha coefficient was 0.89 in the health literacy section, and for the sub-categories, they were 0.87 and 0.66; in the pregnancy outcomes section, it was 0.67; for the sub-categories, they were 0.72 and 0.69. The retest results showed the stability of the questionnaire and its sub-categories. Professor Pender's 18-question questionnaire was used to assess physical activity self-efficacy. Questionnaire answers ranged from 0 to 10. In this way, having complete confidence is 10, having average confidence is five, and not having confidence is zero; the rest of our scores are between these numbers. The validity and reliability of this questionnaire were calculated in Iran (18). In order to comply with research ethics, coded, confidential, and anonymous questionnaires were used.

Data were analyzed using SPSS 20 software. The Independent t-test, one-way ANOVA test, and Pearson correlation were used to investigate the relationship between quantitative and qualitative variables. *P* value < 0.05 was considered as the level of statistical significance.

## Results

The number of postpartum women included in this study was 130. The average age of the participants was  $27.81 \pm 5.52$  years. Fifty-five women (42.3%) had a diploma education, 51 women (39.2%) had a university education, and the rest were under a diploma. More than 89.2% of women were housekeepers. Regarding economic status, 51.5% had monthly income between 1 million and 2 million. Health literacy and self-efficacy had a significant relationship with the level of education and occupation (Table 1).

The average health literacy in postpartum women was  $51.17 \pm 5.53$ ; the lowest health literacy score was 14, and the highest was 56. The mean score of physical activity self-efficacy of women was  $78.4 \pm 50.4$ . 43.8% of women had low self-efficacy, 37.7% had average self-efficacy, and 18.5% had high self-efficacy. There was a significant relationship between health literacy and self-efficacy of women ( $P < 0.05$ ) (Table 2).

## Discussion

This study aimed to investigate the relationship between health literacy and physical activity self-efficacy in postpartum women in Bushehr city. The results showed that the level of health literacy in postpartum women was good and sufficient. The results of Zaree and colleagues' study also showed that the health literacy of 58.9% of women was adequate (19). The results of other studies

also showed that the health literacy of the majority of mothers was sufficient (14,19-21). The results of these studies were in line with the present study. The reason for the sufficient level of health literacy among the participants of this study was their high social level, young age, and place of residence. The study by Peyman and Abdollahi, which investigated health literacy and physical activity self-efficacy in postpartum women, showed that more than 70% of the participants had inadequate and borderline health literacy (11). In the study of Amiresmaili et al and Hosseinpour et al, most participants had inadequate and borderline health literacy (22,23). The reason for insufficient health literacy in these studies may be the different social, cultural, age, and educational characteristics of the studied community. The present study was conducted on the clients of health centers. In other words, women who use primary health care likely have a higher level of health literacy. People with poor health literacy skills have less knowledge about health and receive fewer preventive services from health centers.

In the present study, only 18.5% had high physical activity self-efficacy. The study of Peyman and Abdollahi showed that only 18.3% of women had physical activity self-efficacy (11). Another study that investigated the relationship between physical activity and self-efficacy for postpartum weight management showed a significant relationship between self-efficacy and physical activity level (24). The results of a study on Nigerian women showed that 43.8% of people had high physical activity self-efficacy (4). The results of Roozbahani and colleagues' study showed that self-efficacy plays a vital role in physical activity, and it is necessary to consider self-efficacy in designing interventions that promote physical activity (7).

Also, the results of the present study indicate a significant positive relationship between health literacy and physical activity self-efficacy, which shows that a high level of health literacy in women increases the self-efficacy of physical activity. This result was consistent with the findings of Peyman and Abdollahi's study and Jahani Eftekhari et al study. Peyman and Abdollahi's study showed that women with sufficient health literacy have higher physical activity self-efficacy (11). The results of the study by Jahani Eftekhari et al showed a significant relationship between health literacy and physical activity (25). The results of this study were inconsistent with the study of Sajjadi et al, whose statistical population was rural women of Izeh city. Sajjadi and colleagues' study showed no significant relationship between health literacy and physical activity (16). This difference is probably because women with a lower level of education report their activity more. Also, the results of Dominick and colleagues' study have shown that increasing health literacy has reduced physical activity (26), which is inconsistent with the results of the present study.

The present study's findings showed a significant relationship between the level of self-efficacy of women

**Table 1.** Comparison of mothers' health literacy and physical activity self-efficacy in postpartum women according to demographic variables

Variable	(No. (%))	physical activity self-efficacy		Mean ± SD	Health literacy Test result	
		Mean ± SD	Test result			
Age (y)	<30	83 (63.8)	78.95 ± 51.65	T=0.17, P=0.8	88.21 ± 12.91	T=0.35 P=0.726
	>30	47 (36.2)	77.36 ± 48.71			
Education	Less than a diploma	24 (18.5)	52.08 ± 50.11	F=4.72, P=0.011	88.14 ± 13.35	F=6.48 P=0.002
	Diploma	55 (42.3)	79.82 ± 50.41			
	College Education	51 (39.2)	89.20 ± 31.08			
Occupational status	Housekeeper	116 (89.2)	73.73 ± 11.73	T=-4.25, P<0.001	87.68 ± 13.62	T=-4.25 P<0.001
	Employee	14 (10.8)	116.86 ± 11.34			
The monthly income of the family	Under a million Tomans	45 (34.6)	68.04 ± 47.38	F=1.47, P=0.233	89.09 ± 10.44	F=2.95 P=0.056
	Between 1 and 2 million Tomans	67 (51.5)	83.30 ± 54.16			
	Above 2 million Tomans	18 (13.8)	85.89 ± 40.76			
Gravida	Less than two	52 (40)	81.06 ± 48.76	T=0.49, P=0.623	90.11 ± 11.71	T=1.13 P=0.262
	Two times and more	78 (60)	76.59 ± 51.74			
History of abortion	Does not have	89 (68.5)	78.47 ± 51.73	T=-0.03, P=0.975	87.40 ± 14.30	T=1.43 P=0.155
	One time and more	41 (31.5)	78.17 ± 48.09			

**Table 2.** The relationship between physical activity self-efficacy and health literacy of mothers

Physical activity self-efficacy	Variable	
	P	R
health literacy	0.026	0.196

with education and occupation. Hence, women with a university education and working had more physical activity self-efficacy. This finding was consistent with the studies of Amiresmaili et al, Javadzade et al, Safari Morad Abadi et al, Kharazi et al, Ghanbari et al, and Peyman and Abdollahi (11, 14, 17, 22, 27, 28). The results of the Akbari-Chehrehbargh et al study also showed that women with a university education and working had a higher activity level. Women with a university degree had higher self-efficacy than others, and more self-efficacious women did more physical activity. In a similar study of American rural women, no significant relationship was observed between self-efficacy and education and physical activity. However, the reason may be the high health literacy of the American public (24). Therefore, mothers with higher education have more self-confidence and a higher possibility of success in physical activity, thus improving their health and that of their children. Therefore, health workers' focus on increasing the self-efficacy of mothers can have a significant effect on improving their physical activity level. People's health literacy is not necessarily determined based on years of education or general reading ability.

In order to minimize the impact of various factors affecting health literacy, including education, the health system should be developed for people with low health literacy through education, using simple images and cultural examples through the media, establishing communication in simple language and simpler instructions to increase people's understanding of health information, making it more accessible.

Self-efficacy is the most critical factor influencing the follow-up of health-oriented behaviors and a healthy lifestyle. Therefore, policymakers should consider the importance of this socio-psychological dimension in their health plans to improve women's self-efficacy. So, in health education and health promotion programs, more attention should be paid to health literacy and the amount of physical activity of women, as they are key people who influence the health of family members and, ultimately, the health of society. It is also necessary for the healthcare staff and health workers to provide the necessary information and emphasize the benefits of physical activity and to increase the knowledge and health literacy of women after childbirth in terms of the level of physical activity and to take steps in the direction of improving health and the women of the society take advantage of the positive effects. It is worth mentioning that the support of spouses and family members cannot be regarded as less effective in changing women's views of physical activity and sports.

Therefore, the following strategies are suggested to achieve this goal: regular communication between healthcare professionals and service recipients and spending more and more effective time based on their health literacy level; Designing theory-based educational interventions with the help of health education and health promotion experts; Education and cultural creation through mass media, especially television and radio, can be a practical step to develop health literacy skills as well as correct and principled use of health care services in women's society.

One of the limitations of the present study was the working hours of health centers, which made working women or students less likely to participate in this study. It was challenging to work with women due to the busyness of taking care of children and housework and the length of the questionnaire. Other limitations of this

study include the non-cooperation of the officials of some health centers, the lack of similar studies, and the research project was limited to urban areas, so it is recommended to conduct similar studies in rural areas to determine the level of health literacy. Mothers should be measured in order to prevent the costly consequences of decreasing the level of health literacy.

One of the strengths of this study is that it was the first study that addressed the health literacy and self-efficacy of women's physical activity in Bushehr city, so the data from this study can provide helpful information in the field of women's health literacy and self-efficacy of physical activity after childbirth and the relation of some socio-demographic influencing factors in health literacy in the discretion of the respected officials of Bushehr city.

### Conclusion

In this study, considering women's insufficient physical activity in the postpartum period and the existence of a significant relationship between health literacy and their physical activity self-efficacy, the necessity of designing and implementing interventions based on increasing health literacy and improving physical activity in women is presented. Therefore, by promoting health literacy, teaching the benefits of physical activity, and creating motivation in families to support women in the field of physical activity, especially in the postpartum period, who pay little attention to their health due to the busyness of taking care of the baby, the practical step can be taken to improve the physical activity of this group of women.

### Acknowledgments

The researchers gratefully thank the patients who participated in this study.

### Authors' Contribution

**Conceptualization:** Masoumeh Masoumy, Soudabeh Hamed-Shahraki, Fatemeh Zeraatpishe.

**Data curation:** Masoumeh Masoumy, Fatemeh Zeraatpishe.

**Formal analysis:** Soudabeh Hamed-Shahraki.

**Funding acquisition:** Masoumeh Masoumy.

**Investigation:** Masoumeh Masoumy, Soudabeh Hamed-Shahraki, Fatemeh Zeraatpishe.

**Methodology:** Masoumeh Masoumy, Soudabeh Hamed-Shahraki.

**Project administration:** Masoumeh Masoumy.

**Resources:** Masoumeh Masoumy, Fatemeh Zeraatpishe.

**Software:** Masoumeh Masoumy, Fatemeh Zeraatpishe.

**Supervision:** Masoumeh Masoumy.

**Validation:** Masoumeh Masoumy, Soudabeh Hamed-Shahraki.

**Visualization:** Masoumeh Masoumy, Soudabeh Hamed-Shahraki, Fatemeh Zeraatpishe.

**Writing—original draft:** Masoumeh Masoumy, Fatemeh Zeraatpishe.

**Writing—review & editing:** Masoumeh Masoumy, Soudabeh Hamed-Shahraki, Fatemeh Zeraatpishe.

### Conflict of Interests

The authors declare that there is no conflict of interest.

### Data Availability Statement

The datasets generated and/or analyzed during the current study are not publicly available because the funding body owns the intellectual property. They may be available from the corresponding

author upon reasonable request, containing approval from the associated funding body.

### Ethical Approval

Ethical considerations in this study included obtaining permission from the Ethics Committee of Bushehr University of Medical Sciences (Ethical Code: IR.BPUMS.REC.1396.072) and obtaining written consent from the participants to participate in the study.

### Funding

This article was supported by the Research and Technology Deputy of Bushehr University of Medical Sciences (Grant no. 479).

### References

1. Rauh K, Günther J, Kunath J, Stecher L, Hauner H. Lifestyle intervention to prevent excessive maternal weight gain: mother and infant follow-up at 12 months postpartum. *BMC Pregnancy Childbirth*. 2015;15:265. doi: [10.1186/s12884-015-0701-2](https://doi.org/10.1186/s12884-015-0701-2).
2. Hajimiri K, Shakibazadeh E, Haeri Mehrizi AA, Shab-Bidar S, Sadeghi R. The role of perceived barrier in the postpartum women's health promoting lifestyle: a partial mediator between self-efficacy and health promoting lifestyle. *J Educ Health Promot*. 2018;7:38. doi: [10.4103/jehp.jehp\\_70\\_17](https://doi.org/10.4103/jehp.jehp_70_17).
3. Baattaiah BA, Zedan HS, Almasaudi AS, Alashmali S, Aldhahi MI. Physical activity patterns among women during the postpartum period: an insight into the potential impact of perceived fatigue. *BMC Pregnancy Childbirth*. 2022;22(1):678. doi: [10.1186/s12884-022-05015-0](https://doi.org/10.1186/s12884-022-05015-0).
4. Adeniyi AF, Ogwumike OO, Bamikefa TR. Postpartum exercise among Nigerian women: issues relating to exercise performance and self-efficacy. *ISRN Obstet Gynecol*. 2013;2013:294518. doi: [10.1155/2013/294518](https://doi.org/10.1155/2013/294518).
5. Abdollahi M, Peyman N. The effect of education based on self-efficacy strategies in changing postpartum physical activity. *Med J Mashhad Univ Med Sci*. 2016;59(5):328-36. doi: [10.22038/mjms.2016.9303](https://doi.org/10.22038/mjms.2016.9303). [Persian].
6. Bauer PW, Pivarnik JM, Feltz DL, Paneth N, Womack CJ. Relationship of past-pregnancy physical activity and self-efficacy with current physical activity and postpartum weight retention. *Am J Lifestyle Med*. 2014;8(1):68-73. doi: [10.1177/1559827613498061](https://doi.org/10.1177/1559827613498061).
7. Roozbahani N, Ghofranipour F, Eftekar Ardabili H, Hajizadeh E. The relationship between self-efficacy and stage of change and physical activity behavior in postpartum women. *J Arak Univ Med Sci*. 2013;15(9):61-71. [Persian].
8. Farmanbar R, Akhoondi koulour M, Afkar A, Bakhshi F. Factors associated with physical activity in ringleaders of righteous of Guilan Medical Society Basij Organization: applying the transtheoretical model. *J Mil Med*. 2017;19(1):422-9. [Persian].
9. Karimi FZ, Bagheri S, Tara F, Khadivzadeh T, Mousavi Bazaz SM. Effect of Kangaroo Mother Care on breastfeeding self-efficacy in primiparous women, 3-month after child birth. *Iran J Obstet Gynecol Infertil*. 2014;17(120):1-8. doi: [10.22038/ijogi.2014.3517](https://doi.org/10.22038/ijogi.2014.3517). [Persian].
10. Shang X, Ye L, Gu X, Zhou A, Xu Y, Zhang Y, et al. Attitudes and barriers to physical activity and exercise self-efficacy among Chinese pregnant women: a cross-sectional study. *J Multidiscip Healthc*. 2023;16:3561-73. doi: [10.2147/jmdh.s441210](https://doi.org/10.2147/jmdh.s441210).
11. Peyman N, Abdollahi M. The relationship between health literacy and self-efficacy physical activity in postpartum women. *J Health Lit*. 2016;1(1):5-12. doi: [10.22038/literacy.2016.10850](https://doi.org/10.22038/literacy.2016.10850).
12. Tavananezhad N, Mohamadi Bolbanabad A, Ghelichkhani F, Effati-Daryani F, Mirghafourvand M. The relationship between health literacy and empowerment in pregnant women: a cross-

- sectional study. *BMC Pregnancy Childbirth*. 2022;22(1):351. doi: [10.1186/s12884-022-04686-z](https://doi.org/10.1186/s12884-022-04686-z).
13. Mirzaee K, Oladi Ghadikolaee S, Taghi Shakeri M, Mousavi Bazzaz SM. maternal knowledge on postpartum care in healthcare centers of Mashhad, Iran in 2013. *J Midwifery Reproductive Health*. 2015;3(4):456-64. doi: [10.22038/jmrh.2015.4810](https://doi.org/10.22038/jmrh.2015.4810). [Persian].
  14. Safari Morad Abadi A, Agha Molaei T, Ramezankhani A, Dadipoor S. The health literacy of pregnant women in Bandar Abbas, Iran. *Journal of School of Public Health and Institute of Public Health Research*. 2017;15(2):121-32. [Persian].
  15. Ghaffarzadeh Khoei M, Lamyayan M, Lotfi R, Montazeri A. The relationship between postpartum depression and health literacy among nulliparous women. *Payesh*. 2017;16(6):797-805. [Persian].
  16. Sajjadi H, Hosseinpour N, Sharifian Sani M, Mahmoodi Z. Association between health literacy and life style in married rural women in Izeh, Iran. *J Health*. 2016;7(4):479-89. [Persian].
  17. Kharazi SS, Peyman N, Esmaily H. Association between maternal health literacy level with pregnancy care and its outcomes. *Iran J Obstet Gynecol Infertil*. 2016;19(37):40-50. doi: [10.22038/ijogi.2016.8187](https://doi.org/10.22038/ijogi.2016.8187). [Persian].
  18. Agahheris M, Mousavi E, Janbozorgi M, Barghi Irani Z. The reliability and validity of exercise self- efficacy scale among overweight and obese individuals. *Health Psychol*. 2013;2(5):34-47. [Persian].
  19. Zaree F, Karimi F, Mohseni S, Mdani S, Dadipoor S, Madani AH. Health literacy of pregnant women and some related factors in pregnant women referred to Minab health centers. *J Prevent Med*. 2017;4(2):40-6. [Persian].
  20. Baghaei R, Najarzadeh M, Saei M, Mohamadi N. Functional health literacy in pregnant women in health centers of Urmia city - 2015. *Nurs Midwifery J*. 2017;15(5):368-75. [Persian].
  21. Masoumy M, Jokar Z, Hamed S, Raissifar A, Zeratpisheh F, Ghaedi F. The relationship between maternal health literacy with prenatal cares in pregnant women referring to health centers. *J Health Lit*. 2018;3(2):113-23. doi: [10.22038/jhl.2018.33882.1008](https://doi.org/10.22038/jhl.2018.33882.1008). [Persian].
  22. Amiresmaili M, Nekoei Moghadam M, Saberi Anari S, Sadeghi A, Saber M, Taheri G, et al. Study of health literacy level of women referring to health centers in 2010. *J North Khorasan Univ Med Sci*. 2014;5(5):1071-8. doi: [10.29252/jnkums.5.5.S5.1071](https://doi.org/10.29252/jnkums.5.5.S5.1071). [Persian].
  23. Hosseinpour N, Sajjadi H, Mahmoodi Z, Sharifian Sani M. Health literacy and nutrition status in rural pregnant women of Izeh, Iran. *Nutr Food Sci Res*. 2014;1(Suppl 1):132-3. [Persian].
  24. Akbari-Chehrehbargh Z, Tol A, Shojaeizadeh D, Aazam K, Kia F. Assessing of physical activity self-efficacy and knowledge about benefits and safety during pregnancy among women. *Razi J Med Sci*. 2016;22(139):76-87. [Persian].
  25. Jahani Eftekhari M, Peyman N, Doosti H. The effect of educational intervention based on the self-efficacy and health literacy theory on health promoting lifestyles among female health volunteers of Neyshabur, Iran. *Health Dev J*. 2018;6(4):302-13. doi: [10.22062/jhad.2018.91267](https://doi.org/10.22062/jhad.2018.91267). [Persian].
  26. Dominick GM, Dunsiger SI, Pekmezi DW, Marcus BH. Health literacy predicts change in physical activity self-efficacy among sedentary Latinas. *J Immigr Minor Health*. 2013;15(3):533-9. doi: [10.1007/s10903-012-9666-7](https://doi.org/10.1007/s10903-012-9666-7).
  27. Javadzade SH, Sharifirad G, Radjati F, Mostafavi F, Reisi M, Hasanzade A. Relationship between health literacy, health status, and healthy behaviors among older adults in Isfahan, Iran. *J Educ Health Promot*. 2012;1:31. doi: [10.4103/2277-9531.100160](https://doi.org/10.4103/2277-9531.100160).
  28. Ghanbari S, Majlessi F, Ghaffari M, Mahmoodi Majdabadi M. Evaluation of health literacy of pregnant women in urban health centers of Shahid Beheshti Medical University. *Daneshvar Medicine*. 2020;19(6):1-12. [Persian].

**Cite this article as:** Masoumy M, Hamed-Shahraki S, Zeraatpishe F. The relationship between maternal health literacy with physical activity self-efficacy in postpartum women. *Journal of Multidisciplinary Care*. 2023;12(4):203–208. doi: [10.34172/jmdc.1273](https://doi.org/10.34172/jmdc.1273).