THE JOURNAL OF WORLD WOMEN STUDIES | ISSN 2717-7211

Published Date: 18.12.2022 **, Vol:** 7**, Issue:** 1 | **pp:** 99-107 | **Doi Number:** http://doi.org/10.5281/zenodo.7460153

THE EFFECT OF HEALTH LITERACY LEVEL ON POSTPARTUM MATERNAL ADAPTATION

SAĞLIK OKURYAZARLIK DÜZEYİNİN DOĞUM SONU ANNELİK UYUMUNA ETKİSİ

Çiğdem KARAKAYALI AY [1], Çiğdem ERDEMOĞLU [2], Yeşim AKSOY DERYA [2]

[1] Inonu University, Faculty of Health Sciences, Midwifery Department, Malatya, Turkey
[2] Adıyaman University, Faculty of Health Sciences, Midwifery Department, Adıyaman,Turkey

ABSTRACT

Objective: This study was conducted to evaluate the influence of health literacy level on postpartum maternal adaptation.

Material and Method: A total of 314 postpartum mothers participated in this cross-sectional research. The data was collected using the Personal Information Form, the Health Literacy Scale (HLS), and the Postpartum Self-Evaluation Questionnaire (PSEQ). In the statistical evaluation, descriptive statistics (number, percentage, mean, standard deviation) and Pearson correlation analysis were employed.

Results: The mean age of the women who participated in the study was 28.00±5.41 years. It was determined that 73.2% of the women had a nuclear family structure, 69.1% of the women's income was equal to their expenses, 72.3% had a planned and desired pregnancy, 81.5% went for prenatal care checks regularly, 85.7% did not attend childbirth-preparation class, and 90.1% of births of them attended by a midwife. The women's total scores of the HLS and PSEQ were 105.21±15.17 and 135.19±27.38, respectively. It was found that there was a weak significant correlation between the total scores of the HLS and PSEQ and all of their sub-dimensions, with the exception of the sub-dimensions of access to information in the HLS and satisfaction with the birth experience in the PSEQ, and that postpartum adaptation increased as the level of health literacy increased ($p<0.001$, $p<0.05$).

Conclusion: It was found that as the level of health literacy increased in women in the postpartum period, the level of postpartum adaptation to motherhood also increased. The health literacy level of women can make easier their adaptation to motherhood in the postpartum period.

Keywords: Health Literacy, Postpartum Self-Evaluation, Puerperants

ÖZET

Amaç: Bu araştırma, sağlık okuryazarlığı düzeyinin doğum sonu annelik uyumuna etkisini değerlendirmek amacı ile yapılmıştır.

Gereç ve Yöntem: Kesitsel türde olan bu araştırma doğum sonu dönemde olan 314 kadın ile yürütüldü. Verilerin elde edilmesinde, Kişisel Bilgi Formu, Sağlık Okuryazarlığı Ölçeği (SOÖ), Postpartum Kendini Değerlendirme Ölçeği (PKDÖ) kullanıldı. İstatistiksel değerlendirmede; tanımlayıcı istatistiklerin (sayı, yüzde, ortalama, standart sapma) yanı sıra pearson korelasyon analizi kullanıldı.

Bulgular: Araştırmaya katılan kadınların yaş ortalaması 28.00±5.41' dir. Kadınların %73.2' sinin çekirdek aile yapısına sahip olduğu, %69.1' inin gelirinin giderine denk olduğu, %72.3' ünün planlı ve istenen bir gebelik geçirdiği, %81.5' inin sağlık kontrollerine düzenli gittiği, %85.7' sinin doğuma hazırlık eğitimi almadığı, %90.1' inin doğumunu ebenin gerçekleştirdiği belirlenmiştir. Kadınların SOÖ ve PKDÖ toplam puanı sırasıyla 105.21±15.17, 135.19±27.38' dir. SOÖ bilgiye erişim ve PKDÖ doğum deneyiminden memnun olma alt boyutları hariç SOÖ ve PKDÖ toplam puanları ile tüm alt boyutları arasında zayıf düzeyde anlamlı bir ilişki olduğu ve sağlık okuryazarlık düzeyi arttıkça doğum sonu uyumun da arttığı saptanmıştır ($p<0.001$, $p<0.05$).

Sonuç: Postpartum dönemde kadınlarda sağlık okuryazarlık düzeyi arttıkça anneliğe uyum düzeylerinin de arttığı saptanmıştır. Kadınların sağlık okuryazarlık düzeyi, postpartum dönemde anneliğe uyumlarını kolaylaştırabilir.

Anahtar sözcükler: Lohusalar, Postpartum Kendini Değerlendirme, Sağlık Okuryazarlık.

Sorumlu Yazar / Corresponding Author: Çiğdem ERDEMOĞLU, Res Asst, PhD, Adıyaman University, Faculty of Health Sciences, Midwifery Department, Adıyaman/Turkey. E-mail: cigdem.erdemoglu@adiyaman.edu.tr

Bu makaleye atıf yapmak için / Cite this article: Karakayalı Ay Ç, Erdemoğlu Ç, Aksoy Derya Y. (2022). The Effect of Health Literacy Level on Postpartum Maternal Adaptation. *The Journal of World Women Studies,* 7(1), 99-107. http://doi.org/10.5281/zenodo.7460153

*This study presented as a verbal paper at the 4th International Koru Pregnancy, Birth and Postpartum Congress-held on February 20-23, 2020 in Bolu.

INTRODUCTION

Health literacy is a multidimensional concept described as the capacity of individuals to process, obtain and understand the fundemental level of health information and services they need to make convenient health decisions (Nielsen-Bohlman et al., 2004; Ratzan and Parker, 2000). In the literature, there are studies showing that high levels of health literacy improve quality of life, increase adherence to treatment processes in chronic diseases, promote healthy eating, affect glycemic control and increase breastfeeding rates (Charoghchian-Khorasani et al., 2017; Shrestha et al., 2018; Tseng et al., 2017; Velardo, 2015).

Health literacy in women is a fundamental element of the ability to understand, process and act on health-related information and it encompasses activities such as health promotion and illness prevention (Tehrani et al., 2018). Inadequate health literacy in women can lead to physical and mental health problems for women, children and families (Ferguson, 2008). Women with adequate health literacy play an active role in making significant contributions to their own health as well as the health of their families and indirectly to the health of society (Sørensen et al., 2012). In this context, health literacy to address risks and protective factors in women's health is also important in terms of postpartum women's health and infant health (Nutbeam, 2009).

During the postpartum time, women undergo a complicated process including a variety of elements that necessitate adaptation in terms of child and family (Alshikh-Ahmad et al., 2021). In this critical six-week postpartum period, the psychological changes brought about by the rapid physical changes experienced by women make it difficult to adapt to this process and can lead to various problems (Cooklin et al., 2018). However, postpartum women face certain problems such as acquiring new knowledge and skills, meeting newborn and family/community needs, changing priorities, and decreasing social support. In order to find solutions to these problems, women seek information and it is stated that this situation affects health literacy behaviours (Dennison et al., 2019).

Maternal health literacy is described as a woman's attitude toward improving her and her baby's health, such as getting knowledge on the subjects she needs, appropriately using the information she gets. In addition it is useful in terms of receiving help when needed, and crucial for public health (Kharazi et al., 2016; Khorasani et al., 2020; Mobley et al., 2014). Especially in an important process for both women's and children's health such as the postpartum period, the level of health literacy is very effective in making informed decisions. It is stated that it is expected that the transition to motherhood, which is one of the stages of the postpartum period, will be smoother and the adaptation process will be faster in women who can make informed decisions and have higher level of health literacy (Barnes et al., 2019; Cheong et al., 2018). In this context, it is thought that high health literacy level may have an effect on adaptation to postpartum motherhood. This study was conducted to evaluate the effect of health literacy on postpartum maternity adaptation.

MATERIAL AND METHOD

Design and participants

This cross-sectional study conducted between November 2018 and January 2019 in the puerperal ward of a public hospital located in a provincial center in eastern Turkey. According to the records of the relevant public hospital, there were 4638 vaginal deliveries in 2017. The sample size was calculated as at least 256 puerperants with a 5% bias level at the two-way significance level, 90% confidence interval and 80% ability to represent the universe by performing power analysis (OpenEpi, 2020). The study was completed with 314 puerperants who volunteered to participate. Women with whom verbal communication could be established, whose pregnancy did not occur with assisted reproductive techniques, who gave birth vaginally and at term, and who did not develop any complications in the mother and newborn within the first 72 hours after delivery were included in the study. Puerperants diagnosed with psychiatric illness according to medical records were excluded from the study.

Data Collection Tools

Personal Introduction Form, Health Literacy Scale and Postpartum Self-Evaluation Questionnaire were used to obtain the data.

Personal Introduction Form
The form created to determine the socio-demographic and obstetric characteristics of the women consisted of a total of 12 questions (Cooklin et al., 2018; Kaya-Şenol et al., 2019; Öztürk et al.,. 2022).

Health Literacy Scale (HLS)
The scale developed by Toci et al. (2013) was conducted by Aras and Temel in 2015 (Aras and Temel-Bayık, 2017; Toci et al., 2013). The 25-item scale consists of 4 sub-dimensions and its minimum score is 25 and the maximum score is 125. Low scores indicate poor health literacy and high scores indicate very good health literacy. The Cronbach's Alpha value of the scale was reported to be 0.92 (Aras and Temel-Bayık, 2017). The Cronbach's Alpha reliability coefficient of the scale was found to be 0.93 in this study.

Postpartum Self-Evaluation Questionnaire (PSEQ)
The scale was first developed by Lederman et al. (1981) to assess the adaptation of postpartum women to motherhood (Lederman et al., 1981). The Turkish validity and reliability study was conducted by Taşçı and Mete in 2007. The 82-item scale consists of 7 sub-dimensions. Each sub-dimension consists of 10 to 13 items on average. 39 items of the scale are reversed. Reversed items are reversed when scoring. A minimum score of 82 and a maximum score of 328 can be obtained from the scale. Low scores defined as high postpartum adaptation. The Cronbach alpha coefficient of the scale was found to be 0.92 (Taşçı and Mete, 2007). The Cronbach's Alpha reliability coefficient of the Postpartum Self-Evaluation Questionnaire was found to be 0.94 in this study.

Data Collection
The research data were obtained between November 2018 and January 2019 by using the face-to-face interview technique. First of all, women in the postpartum period were invited to participate in the study and evaluated in terms of the information obtained and inclusion criteria. Data collection took approximately 15 minutes in a quiet environment.

Evaluation of the Data
The data obtained from the study were analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows 25.0 (IBM, Armonk, NY). The normality assumption of the data was checked by Kolmogorov Smirnow test. In statistical evaluation, percentage distribution, arithmetic mean, standard deviation and Pearson Correlation analysis was used. The results were evaluated at 95% confidence interval and significance level $p<0.05$.

Ethical Aspects of the Study
Written permission was obtained from the institution where the research data were obtained (Number: E-92852811-771-52139) and approval from the local ethics committee (Decision No: 2018/21-34). Verbal consent was obtained from puerperants.

RESULTS
The mean age of the puerperants was 28.00 ± 5.41 years, 75.8% resided in the province, 52.2% were primary school graduates, 83.1% were unemployed, 73.2% had a nuclear family, 69.1% had an income equal to their expenses, 72.3% had a planned and desired pregnancy, 81.5% went for prenatal care checks regularly, 85.7% did not attend childbirth-preparation class, and 90.1% were delivered by a midwife 50.0% had female fetus (Table 1).

Table 1. Distribution of Socio-Demographic and Obstetric Variables of Puerperants (n=314)

Variables	**Mean ± SD (Min-Max)**	
Age (year)	28.00 ± 5.41 (18-46)	
Gravida	2.51 ± 1.44 (1-7)	
	n	**%**
Residence		
Province	238	75.8
District	76	24.2
Education		
Primary	164	52.2
Secondary	99	31.5
Bachelors and over	51	16.3
Working status		
No	261	83.1
Yes	53	16.9
Family type		
Nuclear	230	73.2
Extended	84	26.8
Montly income level		
Less than expenses	59	18.8
Equal to expenses	217	69.1
More than expenses	38	12.1
Status of planning and desiring pregnancy		
Unplanned and unwanted	20	6.4
Unplanned but desired	67	21.3
Planned and desired	227	72.3
Regular prenatal care check		
Yes	256	81.5
No	58	18.5
Attending childbirth-preparation class		
Yes	45	14.3
No	269	85.7
Birth attendant		
Midwife	283	90.1
Obstetrician	6	1.9
Midwife and obstetrician	25	8.0
Gender of the fetus		
Female	157	50.0
Male	157	50.0
Total	**314**	**100**

SD: Standard deviation

The lowest and highest scores and the mean scores of the puerperant mothers who participated in the study from the HLS and its sub-dimensions are given in Table 2. The lowest and highest values of the puerperants' total score of the HLS scale and access to information, understanding information, appraisal/evaluation, application/utilization sub-dimension scales were determined as 42-125, 5-25, 11-35, 8-40 and 9-25, respectively. The mean total scores of the puerperant mothers on the HLS scale and access to information, understanding information, appraisal/evaluation, application/utilization sub-dimensions were 105.21 ± 15.17, 21.45 ± 4.42, 28.00 ± 4.37, 33.83 ± 5.42, 21.86 ± 3.25, respectively (Table 2).

Table 2. Distributions of the Mean, Minimum, and Maximum Scores of the Puerperants and the Minimum and Maximum Possible Scores of the Health Literacy Scale (n = 314)

Scale and sub-dimensions	Min-Max Possible Scores	Min-Max Scores	Mean±SD
Total	25-125	42-125	105.21±15.17
Access to information	5-25	5-25	21.45 ± 4.42
Understanding	7-35	11-35	28.00 ± 4.37
Appraisal/Evaluation	8-40	8-40	33.83 ± 5.42
Application/Usage	5-25	9-25	21.86 ± 3.25

SD: Standard deviation

The lowest and highest scores and mean scores of the puerperant women who participated in the study from the PSEQ and its sub-dimensions are given in Table 3. The minimum and maximum values of the puerperants' total score of the PSEQ and the sub-dimensions of quality of the relationship between partners, partners' perspectives on participation in infant care, satisfaction with the birth experience, satisfaction for the continuation of life, trusting the power in coping with motherhood tasks, satisfaction for the motherhood and neonatal care, support of the family and the friends for motherhood were determined as 88-248, 12-38, 11-35, 10-34, 10-37, 14-45, 13-37 and 12-39, respectively and the mean total scores of the puerperants from the sub-dimensions of the PSEQ were 135.19±27.38, 20.20 ± 4.59, 17.42 ± 5.49, 17.40 ± 4.08, 21.56 ± 6.29, 23.47 ± 6.18, 16.95 ± 4.71, 17.96 ± 4.94, respectively (Table 3).

Table 3. Distributions of the Mean, Minimum, and Maximum Scores of the Puerperants and the Minimum and Maximum Possible Scores of the Postpartum Self-Evaluation Questionnaire (n=314)

Scale and sub-dimensions	Min-Max Possible Scores	Min-Max Scores	Mean±SD
Total	82-328	88-248	135.19±27.38
Quality of the relationship between partners	12-48	12-38	20.20 ± 4.59
Partners' perspectives on participation in infant care	11-44	11-35	17.42 ± 5.49
The satisfaction with the birth experience	10-40	10-34	17.40 ± 4.08
Satisfaction for the continuation of life	10-40	10-37	21.56 ± 6.29
Trusting the power in coping with motherhood tasks	14-56	14-45	23.47 ± 6.18
Satisfaction for the motherhood and neonatal care	13-52	13-37	16.95 ± 4.71
Support of the family and the friends for motherhood	12-48	12-39	17.96 ± 4.94

In Table 4, the relationship between the mean scores of the total scores and the mean scores of the sub-dimensions of the HLS and the PSEQ of the puerperants was presented. As a result of the correlation analysis, it was found that there was a weakly significant negative correlation between the total scores and all sub-dimensions of the HLS and PSEQ, except for the sub-dimensions of access to information in the HLS and satisfaction with the birth experience in the PSEQ. Considering that postpartum adaptation increased as the mean score of the PSEQ scale decreased, it was determined that postpartum adaptation increased as the level of health literacy increased ($p<0.001$, $p<0.05$) (Table 4).

Table 4. Relationships Between The Health Literacy Scale and Postpartum Self-Evaluation Questionnaire Total, and Sub-dimensions Scores of The Puerperants (n= 314)

		Postpartum Self-Evaluation Questionnaire							
Health Literacy Scale	**R** ᵦ	Quality of the relationship between partners	Partners' perspectives on participation in infant care	Satisfaction with the birth experience	Satisfaction for the continuation of life	Trusting the power in coping with motherhood tasks	Satisfaction for the motherhood and neonatal care	Support of the family and the friends for motherhood	**Total**
Access to information	r p	-0.268 0.000**	-0.261 0.000**	-0.093 0.098	-0.185 0.001**	-0.172 0.002**	-0.174 0.002**	-0.167 0.003**	-0.254 0.000**
Understanding	r p	-0.369 0.000**	-0.336 0.000**	-0.166 0.000**	-0.284 0.000**	-0.222 0.000**	-0.253 0.000**	-0.255 0.000**	-0.365 0.000**
Appraisal/Evaluation	r p	-0.387 0.000**	-0.307 0.000**	-0.211 0.000**	-0.232 0.000**	-0.283 0.000**	-0.225 0.000**	-0.276 0.000**	-0.372 0.000**
Application/Usage	r p	-0.352 0.000**	-0.287 0.000**	-0.225 0.000**	-0.132 0.019*	-0.307 0.000**	-0.194 0.000**	-0.281 0.000**	-0.340 0.000**
Total	r p	-0.390 0.000**	-0.340 0.000**	-0.200 0.000**	-0.243 0.000**	-0,279 0,000**	-0,244 0,000**	-0.275 0.000**	-0.381 0.000**

**p<0.01, *p<0.05, R^{β}: Pearson Correlation

DISCUSSION

Health literacy in women is recognized to be effective in maintaining health or preventing diseases for women and their children (Aljassim and Ostini, 2020; Shieh and Halstead, 2009). There are many studies in the literature related to women's postpartum adaptation (Altıntuğ and Ege, 2013; Asadi et al., 2020; Başar and Arıöz, 2017), but no study has been found to examine the effect of health literacy level on postpartum maternal adaptation in women.

Within the scope of the study, the health literacy level of women in the postpartum period was determined as 'high' (Table 2). In studies of different ethnic origins evaluating the level of health literacy in women, it is seen that health literacy remains at low limits, and this situation is especially related to age, education level and lack of resources (Charoghchian-Khorasani et al., 2020; França et al., 2020; Jarahi et al., 2017). In studies conducted on women in the Turkish society in the postpartum period, health literacy was found to be relatively higher compared to studies of different ethnic origins, which is similar to our research findings (Öztürk et al., 2022; Toksoy and Cesur, 2020). According to the results of the Turkish Demographic and Health Surveys (TDHS), the rate of receiving postnatal care is 95% (TDHS, 2019). It can be said that this situation may be related to the ease of communicating with midwives and nurses and accessing information in the health system of our country, and it can be said to make a significant contribution to increasing the level of health literacy in women.

In this study, the women had a high level of adaptation to motherhood (Table 3). The scores we obtained from the total and sub-dimensions of the PSEQ in the study are higher than similar studies in the literature (Demir and Taşpınar, 2022; Gümüşsoy and Unsal-Atan, 2019; Gökçe-İşbir et al., 2016). The high health literacy level of women can be attributed to the fact that the majority of the participants had a planned and desired pregnancy, which facilitated their adaptation to motherhood and contributed positively to this adaptation.

In this study, it was determined that there was a statistically weakly significant relationship between women's health literacy and total scores of Postpartum Self-Evaluation Questionnaires, so the level of health literacy positively affected the process of adaptation to postpartum motherhood (Table 4, $p<0.05$, $p<0.001$). Contrary to the postpartum period, there are many studies on health literacy in pregnancy in the literature. This studies have revealed that women with low health literacy levels have higher rates of birth trauma, unpleasant birth experiences, more perception of complications that occur during pregnancy, and higher rates of mental health problems (Hussey et al., 2016; Kilfoyle et al., 2016; Kaya-Şenol et al., 2019). In a postpartum cohort study, women with high health literacy met the criteria for postpartum depression at a lower rate than women with low health literacy (Weiss et al., 2009). In this study, it can be said that as the level of health literacy increases, the level of satisfaction with the continuation of life increases and this finding is in parallel with the literature.

In this study, partners' perspectives on participation in infant care, trusting the power in coping with motherhood tasks, and satisfaction for the motherhood and neonatal care increased with increasing health literacy level (Table 4, $p<0.001$). However, in parallel with this study, it has been reported that low parental health literacy and inadequate parental knowledge are associated with inadequate preventive care behaviors for children (Alinejad-Naeini et al., 2021). It is reported that strengthening parents' health knowledge and competencies can contribute to improving child health (de Buhr and Tannen, 2020).

Alinejad-Naeini et al. (2021) determined that there is a strong relationship between health literacy and social support (Alinejad-Naeini et al., 2021). Positive resources and support in the social environment of individuals can improve people's ability to obtain and understand health information (Lee et al., 2004) and in this context, the significant relationship between health literacy level and social support and the findings of this study are similar to the literature.

Finally, we evaluated the relationship between health literacy and postpartum self-evaluation of the puerperants. In this study, the quality levels of the relationship between spouses increased as the level of health literacy increased (Table 4, $p<0.001$). In a study, it was found that there was a significant positive relationship between health literacy level and marital satisfaction (Tavasoli and Nava, 2017). Spouses with high levels of health literacy may perceive relationship quality at a higher level. Health literacy is critical for maternal and infant outcomes and can affect maternal and newborn health by influencing women's access to information, understanding and making informed decisions during pregnancy, childbirth and postpartum period. Since there are no studies examining the effect of health literacy on postpartum self-evaluation in the existing literature, it is thought that this study will contribute to future studies.

Limitations

This study has some limitations. Data were collected from Turkish women in the postpartum period. Therefore, the findings should not be generalized to other populations and should be confirmed by larger studies. Examining the effect of health literacy on postpartum self-evaluation in a significant sample group constitutes the strength of this study.

CONCLUSION

In line with the findings obtained in the study, it was found that the health literacy and postpartum self-evaluation levels of mothers were at a moderate level and postpartum adaptation increased as the health literacy level of mothers increased. Midwives and other health professionals can play an active role in eliminating the lack of information about the postpartum period and solving the problems by determining the health literacy levels of women in the postpartum period. Considering the emphasis of the Millennium Development Goals on improving mothers and newborn health globally and the significant impact of empowering women on pregnancy and birth outcomes, health literacy in postpartum women is an effective tool to increase the effectiveness of health services. Therefore, increasing the health literacy of all women in reproductive age is recommended.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Plan, design: ÇKA, ÇE, YAD; Material, methods and data collection: ÇKA, ÇE; Data analysis and comments: ÇKA, ÇE, YAD; Writing and Critical Review: ÇKA, ÇE, YAD.

Funding

This research received no external funding.

REFERENCES

Alinejad-Naeini, M., Razavi, N., Sohrabi, S., Heidari-Beni, F. (2021). The association between health literacy, social support and self-efficacy in mothers of preterm neonates. The Journal of Maternal-Fetal & Neonatal Medicine: The Official Journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians, 34(11), 1703–1710.

Aljassim, N., Ostini, R. (2020). Health literacy in rural and urban populations: A systematic review. Patient Education and Counseling, 103(10), 2142-2154.

Alshikh-Ahmad, H., Alkhatib, A., Luo, J. (2021). Prevalence and risk factors of postpartum depression in the Middle East: a systematic review and meta-analysis. BMC Pregnancy and Childbirth, 21(1), 542.

Altuntuğ, K ve Ege, E. (2013). Effects of health education on mothers' readiness for postpartum discharge from hospital, on postpartum complaints, and quality of life, Journal of Research and Development in Nursing, 15(2), 45-56.

Aras Z, Temel-Bayık, A. (2017). Evaluation of the validity and reliability of the Turkish form of the Health Literacy Scale. Florence Nightingale Nursing Journal, 25(2), 85–94.

Asadi, M., Noroozi, M., Alavi, M. (2020). factors affecting women's adjustment to postpartum changes: A narrative review. Iranian Journal of Nursing and Midwifery Research, 25(6), 463–470.

Barnes, L., Barclay, L., McCaffery, K., Aslani, P. (2019). Women's health literacy and the complex decision-making process to use complementary medicine products in pregnancy and lactation. Health expectations: An İnternational Journal of Public Participation in Health Care and Health Policy, 22(5), 1013–1027.

Başar, F., Arıöz, D. T. (2017). The evaluation of the education for the pregnants on puerperium care and baby care. Journal of Current Researches on Health Sector, 7(2), 169-182.

Charoghchian-Khorasani, E., Peyman, N., Esmaily, H. (2017). Relations between breastfeeding self-efficacy and maternal health literacy among pregnant women. Evidence Based Care, 6(4), 18-25.

Charoghchian-Khorasani, E., Tavakoly Sany, S. B., Orooji, A., Ferns, G., Peyman, N. (2020). Health literacy in Iranian women: A systematic review and meta-analysis. Iranian Journal of Public Health, 49(5), 860–874.

Cheong, S. M., Mohamad Nor, N. S., Ahmad, M. H., Manickam, M., Ambak, R., Shahrir, S. N., Aris, T. (2018). Improvement of health literacy and intervention measurements among low socio-economic status women: findings from the MyBFF@ home study. BMC women's health, 18(1), 63-70.

Cooklin, A. R., Amir, L. H., Nguyen, C. D., Buck, M. L., Cullinane, M., Fisher, J., Donath, S. M., CASTLE Study Team (2018). Physical health, breastfeeding problems and maternal mood in the early postpartum: A prospective cohort study. Archives of Women's Mental Health, 21(3), 365–374.

de Buhr, E., Tannen, A. (2020). Parental health literacy and health knowledge, behaviours and outcomes in children: A cross-sectional survey. BMC Public Health, 20(1), 1096.

Demir, R., Taşpınar, A. (2022). The effect of discharge education given with different postpartum education methods on discharge ready, postpartum adaptation process and breastfeeding self-efficiency. Journal of Adnan Menderes University Health Sciences Faculty, 6(1), 97-115.

Dennison, R. A., Ward, R. J., Griffin, S. J., Usher-Smith, J. A. (2019). Women's views on lifestyle changes to reduce the risk of developing Type 2 diabetes after gestational diabetes: a systematic review, qualitative synthesis and recommendations for practice. Diabetic medicine : A journal of the British Diabetic Association, 36(6), 702–717.

Ferguson, B. (2008). Health literacy and health disparities: The role they play in maternal and child health. Nursing For Women's Health, 12(4), 286–298.

França, A. S., Pirkle, C. M., Sentell, T., Velez, M. P., Domingues, M. R., Bassani, D. G., Câmara, S. (2020). Evaluating health literacy among adolescent and young adult pregnant women from a low-ıncome area of northeast Brazil. International Journal of Environmental Research and Public Health, 17(23), 8806.

Gökçe-İşbir, G., İnci, F., Bektaş, M., Dikmen-Yıldız, P., & Ayers, S. (2016). Risk factors associated with post-traumatic stress symptoms following childbirth in Turkey. Midwifery, 41, 96–103.

Gümüşşoy, S., Ünsal-Atan, S (2019). The effect of maternal adaptation on breastfeeding self-efficacy. Worldwide Medicine, 1(5), 154-163.

Hacettepe University Institute of Population Studies (2019). 2018 Turkey Demographic and Health Survey. Hacettepe University Institute of Population Studies, T.R. Presidency of Turkey Directorate of Strategy and Budget and TUBITAK Ankara, Turkey.

Hussey, L. C., Frazer, C., Kopulos, M. I. (2016). Impact of health literacy levels in educating pregnant Millennial women. International Journal of Childbirth Education, 31(3):13-18.

Institute of Medicine (US) Committee on Health Literacy, Nielsen-Bohlman, L., Panzer, A. M., & Kindig, D. A. (Eds.). (2004). Health Literacy: A Prescription to End Confusion. National Academies Press (US).

Jarahi, L., Asadi, R., Hakimi, H. R. (2017). General Health Literacy Assessment of Iranian women in Mashhad. Electronic Physician, 9(11), 5764–5769.

Kaya-Şenol, D., Göl, I., Aydın-Ozkan, S. (2019). The effect of health literacy levels of pregnant women on receiving prenatal care: A cross-sectional descriptive study. International Journal of Caring Sciences, 2(3), 1717-1724.

Kharazi, S., Peyman, N., Esmaily, H. (2016). Association between maternal health literacy level with pregnancy care and its outcomes. The Iranian Journal of Obstetrics, Gynecology and Infertility, 19(37), 40-50.

Khorasani, E. C., Sany, S. B. T., Orooji, A., Ferns, G., Peyman, N. (2020). Health literacy in Iranian women: A systematic review and meta-analysis. Iranian Journal of Public Health, 49(5), 860.

Kilfoyle, K. A., Vitko, M., O'Conor, R., Bailey, S. C. (2016). Health literacy and women's reproductive health: A systematic review. Journal of Women's Health, 25(12), 1237-1255.

Lederman, R. P., Weingarten, C. G., Lederman, E. (1981). Postpartum self-evaluation questionnaire: Measures of maternal adaptation. Birth Defects Original Article Series, 17(6), 201-231.

Lee, S. Y., Arozullah, A. M., Cho, Y. I. (2004). Health literacy, social support, and health: A research agenda. Social Science & Medicine (1982), 58(7), 1309–1321.

Mobley, S. C., Thomas, S. D., Sutherland, D. E., Hudgins, J., Ange, B. L., Johnson, M. H. (2014). Maternal health literacy progression among rural perinatal women. Maternal and Child Health Journal, 18(8), 1881–1892.

Nutbeam, D. (2009). Defining and measuring health literacy: What can we learn from literacy studies?. International Journal of Public Health, 54(5), 303-305.

OpenEpi. (2020). http://www.openepi.com/SampleSize/SSPropor.htm

Öztürk, S., Nacar, G., Timur-Taşhan, S. (2022). Does health literacy level affect traditional practices towards postpartum mother? The Journal of Gynecology- Obstetrics and Neonatology, 19(2):1277-1282.

Ratzan, S. C., Parker, R. M., Selden, C., Zorn, M. (2000). National library of medicine current bibliographies in medicine: health literacy. Bethesda, MD: National Institutes of Health, US Department of Health and Human Services.

Shieh, C., Halstead, J. A. (2009). Understanding the impact of health literacy on women's health. Journal of Obstetric, Gynecologic, and Neonatal Nursing: JOGNN, 38(5), 601–612.

Shrestha, A., Singh, S. B., Khanal, V. K., Bhattarai, S., Maskey, R., Pokharel, P. K. (2018). Health literacy and knowledge of chronic diseases in Nepal. Health Literacy Research and Practice, 2(4), e221–e230.

Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., Brand, H., (HLS-EU) Consortium Health Literacy Project European (2012). Health literacy and public health: A systematic review and integration of definitions and models. BMC Public Health, 12, 80.

Taşçı, K. D., Mete, S. (2007). Validity and reliability study of the Postpartum Self Evaluation Questionnaire. Journal of Atatürk University School of Nursing High School, 10(2), 20-29

Tavasoli, Z., Nava, F. (2017). The relationship between health literacy and marital satisfaction and quality of life of married women aged 30 to 40 in Mashhad. Journal of Health Literacy, 2(1), 31-38.

Tehrani, H., Rahmani, M., Jafari, A. (2018). Health literacy and Its relationship with general health of women referring to health care centers. Journal of Health Literacy, 3(3), 191-198.

Toci, E., Burazeri, G., Jerliu, N., Sørensen, K., Ramadani, N., Hysa, B., Brand, H. (2015). Health literacy, self-perceived health and self-reported chronic morbidity among older people in Kosovo. Health Promotion International, 30(3), 667–674.

Toksoy, K. H., Cesur, B. (2020). The Relationship between health literacy and breastfeeding attitude in primiparous women. International Journal of Caring Sciences, 13(3), 1930.

Tseng, H. M., Liao, S. F., Wen, Y. P., Chuang, Y. J. (2017). Stages of change concept of the transtheoretical model for healthy eating links health literacy and diabetes knowledge to glycemic control in people with type 2 diabetes. Primary Care Diabetes, 11(1), 29–36.

Velardo S. (2015). The nuances of health literacy, nutrition literacy, and food literacy. Journal of Nutrition Education and Behavior, 47(4), 385–9.e1.

Weiss, B. D., Sheehan, C. P., Gushwa, L. L. (2009). Is low literacy a risk factor for symptoms of depression in postpartum women?. The Journal of Reproductive Medicine, 54(9), 563-568.