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Assessment of health-promoting lifestyle habits in normal and high-risk pregnancies

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Abstract

Objective: We planned this study in descriptive type in order to assess health-promoting lifestyle habits in normal and high-risk pregnancies.

Methods: The population of the study consisted of all pregnant women who were receiving service at the clinic of high-risk and normal pregnancies of Konya Maternity Ward, Turkey. The size of population was calculated by power analysis as 71 individuals per group (total n=142). In order to prevent data losses, a total of 145 pregnant women were contacted. Pregnant women who volunteered to participate in the study, older than 18-year-old, who had no mental disorder and primary school graduate at least were included in the study. The data of the study was collected by sociodemographic questionnaire and Health Promoting Lifestyle Profile (HPLP) scale.

Results: The mean of total HPLP score was 117.27±24.24 in normal pregnant women, and 123.62±25.44 in high-risk pregnant women. There was no significant difference between normal and high-risk pregnancies in terms of total HPLP scores. However, there was a significant difference between two groups in terms of health responsibility (p=0.047), exercise (p=0.031) and stress management (p=0.039) subscales.

Conclusion: In this study, we evaluated the health-promoting lifestyle habits of pregnant women and the factors affecting these habits. According to the results of the study, the development of risk conditions or their pre-existence during pregnancy makes a difference in the levels of health-promoting lifestyle habits and affects them negatively.

Keywords: High-risk pregnancy, normal pregnancy, health-promoting lifestyle habit.

Özet: Normal ve riskli gebeliklerde sağlıklı yaşam biçimi davranışlarının değerlendirilmesi

Amaç: Bu araştırma, normal ve riskli gebeliklerde sağlıklı yaşam biçimi davranışlarının değerlendirilmesi amacıyla tanımlayıcı tipte planlanmıştır.

Yöntem: Araştırmanın evrenini Konya doğumevinde yüksek riskli gebelik ve normal gebelik polikliniğinde hizmet alan tüm gebe kadınlar oluşturmakta idi. Örneklem büyüklüğü power analizi ile her grup için 71 kişi olarak hesaplandı (toplam n=142). Veri kayıplarını önlemek amacıyla toplamda 145 gebe kadına ulaşıldı. Araştırmaya gönüllü olarak katılmayı kabul eden, 18 yaşından büyük, psikolojik bir rahatsızlığı olmayan, en az ilkokul mezunu olan gebeler alındı. Araştırmada sosyodemografik soru formu ve Sağlıklı Yaşam Biçimi Davranışları (*Health Promoting Lifestyle Profile*, HPLP) ölçeği ile veriler toplandı.

Bulgular: Gebelerin HPLP toplam puan ortalaması normal gebelerde 117.27±24.24, riskli gebelerde ise 123.62±25.44 olarak hesaplandı. Normal ve riskli gebeliklerin HPLP toplam puanları arasında anlamlı fark bulunmadı. Ancak ölçeğin alt boyutlarından sağlık sorumluluğu (p=0.047), egzersiz (p=0.031) ve stres yönetiminde (p=0.039) normal ve riskli gebeler arasında anlamlı fark bulundu.

Sonuç: Bu çalışmada gebelerin sağlıklı yaşam biçimi davranışları ve etkileyen faktörler incelenmiştir. Çalışmanın sonucuna göre gebelikte riskli durumların ortaya çıkması ya da önceden var olması gebelerin sağlıklı yaşam biçimi davranış düzeylerinde farklılık ortaya çıkarmakta ve olumsuz etkilemektedir.

Anahtar sözcükler: Riskli gebelik, normal gebelik, sağlıklı yaşam biçimi davranışı.

Introduction

Pregnancy and labor are physiological processes. However, they also can be the processes full of anxiety and concerns. Physiological changes during pregnancy may narrow down the line between health and illness. Therefore, each pregnancy poses a potential risk.[1] Human body undergoes significant physiological, anatomic and biochemical changes starting with the fer-

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tilization in order to adapt to the pregnancy.[2] A woman with the high-risk pregnancy has physical, emotional and social problems. The physiological problems which pose a risk for pregnancy can be pre-existing issues before the pregnancy (such as heart disease, diabetes, hypertension) as well as problems directly developing during pregnancy (such as preeclampsia, eclampsia, hemorrhage, hypertension).[3] All pregnancies should be evaluated in terms of current and potential risk factors. Some women have particular risk factors even in the beginning of pregnancy such as diabetes or preterm labor history, which include them into the high-risk category. In other women who do not have any current risk factors, pregnancy starts normally and then risk factors such as rupture of membrane or pregnancy-induced hypertension may develop later.[4]

Health promotion is defined as the process of enabling individuals to increase control over, and to improve their health. It is fundamental to resort health-promoting habits to protect oneself from diseases, establish early diagnosis and maintain health.[5,6] According to Pender, health-promoting lifestyle habits are spiritual growth, health responsibility, exercise, nutrition, interpersonal relations and stress management.[7] The development of health-promoting lifestyle habits of pregnant women may vary according to the risk condition. We planned this study in descriptive type in order to assess health-promoting lifestyle habits in normal and high-risk pregnancies.

Methods

The population of the study consisted of all normal and high-risk pregnant women who were receiving service at the High-Risk Pregnancy Service and Pregnancy Polyclinic at Konya Maternity Ward, Turkey between January 1, 2016 and May 31, 2016. The size of the population was calculated as 71 individuals per group (total n=142) via G*Power 3.0.10 as determining the known score (121.31±21.02) with 80% power within 10-point deviation.[8] In order to prevent data losses, a total of 145 pregnant women were contacted. The data was collected by researchers via face-to-face interview method. Pregnant women who volunteered to participate in the study, older than 18-year-old, who had no mental disorder and primary school graduate at least were included in the study. The data was collected through sociodemographic questionnaire and the scale of Health-Promoting Lifestyle Profile.

The "Sociodemographic Questionnaire" consisting of 23 questions was created by the researchers through literature review to evaluate the sociodemographic characteristics of individuals.

The scale of Health Promoting Lifestyle Profile (HPLP) was developed by Walker, Sechreist and Pender in 1987 to evaluate the health-promoting habits of individuals associated with a healthy lifestyle.[9] The rating of the scale is 4-point Likert. The responses of the scales are "never" (1), "sometimes" (2), "often" (3) and "routinely" (4). The lowest score is 48 and the highest score is 192 for the entire scale. The overall score of the scale provides the score of HPLP. The alpha value of the scale, which was used by Esin (1997) in Turkey with its first version including the 48 items and evaluated for validity and reliability, was 0.91. The scale has self-actualization dimension in "Items 3, 8, 9, 12, 16, 17, 21, 23, 29, 34, 37, 44, 48", health responsibility dimension in "Items 2, 7, 15, 20, 28, 32, 33, 42, 43, 46", exercise dimension in "Items 4, 13, 22, 30, 38", nutrition dimension in "Items 1, 5, 14, 19, 26, 35", interpersonal support dimension in "Items 10, 18, 24, 25, 31, 39, 47", and stress management dimension in "Items 6, 11, 27, 36, 40, 41, 45".[10] In our study, we used the first version of HPLP scale consisting of 48 items which were validated for reliability by Esin.

Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA) was used for the statistical analysis. The data obtained in the study was presented as figure, percentage, arithmetic mean and standard deviation. After normality analyses performed on the data, t-test and one-way analysis of variance (ANOVA) tests were applied in the independent groups, and $p<0.05$ was considered significant.

Results

When the descriptive characteristics of the pregnant women (n=145) included in the study were analyzed, the current age of pregnant women was found 26.11±5.47 years. Of the pregnant women, the age of first marriage was 20.85±2.92 years and the age of first delivery was 22.63±3.33 years. While 49.7% of pregnant women were secondary school graduate, 84.8% of them had no job ever, 69.7% of them were living in city and 84.8% of them had health insurance. The week of gestation was 33.73±6.38. Monthly income in the family of 77.9% of the pregnant women was at medium level (incomes and expenses were equal). While 15.9% of pregnant women

Table 1. The descriptive characteristics of the pregnant women and the distribution of their mean HPLP scores.

Characteristics	n	%	Mean±SD	Statistical analysis
Educational status				
Primary school	13	9.0	113.92±31.89	F=2.897
Secondary school	72	49.7	116.78±25.07	p=0.058
Higher education	60	41.4	126.22±22.31	
Financial status				
Income lower than expenses (low)	22	15.2	105.09±25.24	**F=11.531**
Income equal to expenses (medium)	113	77.9	121.02±23.52	**p=0.000**
Income higher than expenses (high)	10	6.9	147.50±14.30	
Consanguineous marriage				
Yes	23	15.9	112.48±25.77	t=-1.675
No	122	84.1	121.93±24.63	p=0.096
Social security				
N/A	22	15.2	108.32±23.59	**F=4.905**
SSI (SGK)	115	79.3	121.53±24.34	**p=0.009**
Private insurance	8	5.5	137.88±25.96	

had consanguineous marriage, the husbands of 56.6% of pregnant women helped them for chores during pregnancy. When there was a problem associated with pregnancy, 58.6% of the pregnant women consulted healthcare professionals. The descriptive characteristics of the pregnant women and the distribution of their mean HPLP scores are presented in **Table 1**. There was a significant difference between mean HPLP scores of the pregnant women and their financial and social security conditions ($p<0.05$). There was no significant difference between other descriptive characteristics and HPLP scores ($p>0.05$).

The gestational characteristics of the pregnant women and their distribution according to mean HPLP scores are presented in **Table 2**. Of the pregnant women, 15.2% had a chronic disease. While 51% of them were on their first pregnancy (primiparous), 89% of them planned their pregnancy, and 20% of them had the history of miscarriage/abortion. Of the multiparous preg-

Table 2. The gestational characteristics of the pregnant women and the distribution of their mean HPLP scores.

Gestational characteristics	n	%	Mean±SD	Statistical analysis
Gravida				
First pregnancy	74	51.0	127.64±23.04	**t=3.702**
Two and more	71	49.0	112.92±24.82	**p=0.000**
Planned pregnancy				
Yes	129	89.0	122.07±24.54	**t=2.281**
No	16	11.0	107.19±25.17	**p=0.024**
Week of gestation				
28 and below	25	17.2	118.92±30.19	t=-0.284
29 and above	120	82.8	120.74±23.87	p=0.779
Presence of the history of miscarriage/abortion				
Yes	29	20.0	109.31±20.43	**t=-2.741**
No	116	80.0	123.21±25.29	**p=0.007**
Presence of chronic disease				
Yes	22	15.2	123.09±21.93	t=0.542
No	123	84.8	119.95±25.52	p=0.589

Table 3. The distribution of mean HPLP and subscale scores of the pregnant women.

	Mean±SD	Min–Max	Mean scores to be taken from the scale	
			The lowest	The highest
Total HPLP score	120.42±24.96	60–180	48	192
Self actualization	33.56±7.05	17–50	13	52
Health responsibility	24.08±6.70	11–38	10	40
Exercise	10.25±3.68	5–19	5	20
Nutrition	16.08±3.34	7–24	6	24
Interpersonal support	19.04±3.74	9–28	7	28
Stress management	17.39±4.40	7–28	7	28

nant women (49.0%), 37.9% had normal delivery and 13.1% underwent cesarean section. A significant difference was found between gravida, planned pregnancy, history of miscarriage/abortion and HPLP scores ($p<0.05$).

HPLP scores and mean subscale scores of the pregnant women are presented in **Table 3**. Mean total HPLP score was calculated 120.42±24.96 (min=60, max=180). Considering the mean scores of HPLP subscales, it was found that "Self Actualization" subscale had the highest mean score (33.56±7.05) while "Exercise" subscale had the lowest mean score (10.25±3.68). While 50.3% (n=73) of the cases had normal pregnancy women, 49.7% (n=72) of them hospitalized in the clinic with the diagnosis of high-risk pregnancy.

Table 4 presents the diagnoses of pregnant women who were hospitalized at high-risk pregnancy clinic. In terms of the hospitalization at high-risk pregnancy clinic, 33.3% of the pregnant women were diagnosed with threat of premature birth, 12.5% of them with hemorrhage, 11.1% of them with premature rupture of membrane, 6.9% of them with oligohydramnios, 5.6% of them with preeclampsia, and 30.6% of them with other reasons (ablatio placentae, placenta previa, polyhydramnios, multiple pregnancy, imminent abortion, infection, fetal distress, hyperemesis gravidarum, hypertension, upper respiratory tract infection etc.).

Mean scores of HPLP and subscales of normal and high-risk pregnant women are compared in **Table 5**.

Table 4. Distribution of high-risk pregnant women according to their risk conditions.

High-risk pregnancy diagnosis	n	%
Hemorrhage	9	12.5
Threat of premature birth	24	33.3
Premature rupture of membrane	8	11.1
Preeclampsia	4	5.6
Oligohydramnios	5	6.9
Other reasons*	22	30.6
Total	72	100

*Ablatio placentae, placenta previa, polyhydramnios, multiple pregnancy, imminent abortion, infection, fetal distress, hyperemesis gravidarum, hypertension, upper respiratory tract infection etc.

Table 5. Comparison of HPLP and subscales of normal and high-risk pregnant women.

	Normal pregnancy	High-risk pregnancy		
	Mean±SD	Mean±SD	t	p
Total HPLP score	117.27±24.24	123.62±25.44	-1.539	0.126
Self actualization	33.28±6.74	33.84±7.39	-0.476	0.635
Health responsibility	22.98±6.83	25.19±6.43	-2.003	**0.047**
Exercise	9.60±3.53	10.91±3.73	-2.174	**0.031**
Nutrition	15.80±3.20	16.36±3.46	-0.996	0.321
Interpersonal support	18.94±3.80	19.15±3.70	-0.333	0.740
Stress management	16.64±4.22	18.15±4.49	-2.085	**0.039**

Although there was no significant difference between normal and high-risk pregnancies in terms of total HPLP scores, a significant difference was found between the groups in terms of health responsibility, exercise and stress management subscales ($p<0.05$).

Discussion

In our study, we found that the mean age of pregnant women was 26.11±5.47 years, 49.7% of them were secondary school graduate, 84.8% of them had no job ever, and 69.7% of them were living in city. Monthly income in the family of 77.9% of the pregnant women was at medium level (incomes and expenses were equal). Saydam et al. found in their study that mean age of pregnant women was 29.54±6.26 years, 49.6% of them were primary school graduate/secondary school dropout, 84.9% of them had no job ever, 64.8% of them were living in metropolis/city, and income-expense levels of 72.3% of them were "equal".[8] The week of gestation was 33.73±6.38. Of the pregnant women, 15.9% had consanguineous marriage. Our results show similarity with the studies in the literature.[8,11] In our study, there is a significant difference between mean HPLP scores of the pregnant women and their financial and social security conditions. There is no significant difference between other descriptive characteristics and HPLP scores. Onat and Aba found difference in their study between HPLP scores and financial conditions of pregnant women. We found a significant difference in our study between gravida, planned pregnancy, history of miscarriage/abortion and HPLP scores. Unlike our study, Onat and Aba did not find a difference in their study between HPLP score and pregnancy being planned.[11] The mean total HPLP score of the pregnant women was 120.42±24.96 (min=60, max=180). Considering the mean scores of HPLP subscales, we found that "self actualization" subscale had the highest mean score (33.56±7.05) while "exercise" subscale had the lowest mean score (10.25±3.68). The mean scores of HPLP and subscales in this study show similarity with the literature.[8,10–14]

We found significant difference in our study between normal and high-risk pregnant women in terms of health responsibility, exercise and stress management, which are the subscales of HPLP. In case of any risk condition, it is possible that the pregnant women receive care service from healthcare professionals, that there may be physical restrictions and that they may have difficulties to deal with their condition etc. We found statistically significant difference in HPLP subscales of normal and high-risk pregnant women; however, there are no great differences among the mean scores. Therefore, we believe that it is necessary to evaluate health-promoting lifestyle habits of all pregnant women identified.

Conclusion

In this study, we evaluated the health-promoting lifestyle habits of pregnant women and the factors affecting these habits. There was no significant difference between normal and high-risk pregnancies in terms of total HPLP scores in our study. However, we found significant difference between the groups in terms of health responsibility, exercise and stress management subscales. Healthcare professionals have prominent roles to encourage pregnant women for health-promoting habits. Pregnant women should be evaluated comprehensively during antenatal care, and wrong habits should be identified. Through training programs or consultancy, pregnant women and their spouses should be encouraged for health-promoting habits. There are many studies on this topic among the general population; however, there are a limited number of studies focusing on pregnancy. The number of studies carried out on pregnant women should be increased. The results of this study can be used as a reference for antenatal care, healthcare professionals and maternal/neonatal health policies.

Conflicts of Interest: No conflicts declared.

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