

## ARAŞTIRMA/RESEARCH

### ADAPTATION TO PREGNANCY AND ABILITY TO COPE WITH STRESS OF PREGNANT WOMEN DIAGNOSED WITH HYPEREMESIS GRAVIDARUM\*

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#### ABSTRACT

**Aim:** This research has been done in order to determine of adapting to pregnancy and coping styles with stress of pregnant diagnosed of hyperemesis gravidarum.

**Methods:** The descriptive study was conducted with 160 pregnant women diagnosed as hyperemesis gravidarum and hospitalized in a women's health education and research hospital. Ethics Committee approval and the necessary permits are obtained for this research. Information Form, Prenatal Self Evaluation Questionnaire (PSEQ) and Ways of Coping with Stress Inventory (WCSI) are used to collect of data. Number, percentage, mean, standard deviation, minimum and maximum values and pearson correlation were used to evaluate of data.

**Results:** The PSEQ point average was 173.3±35.8. The WCSI sub-dimension point average for "self-confident approach" was 14.5±4.5, "optimistic approach" was 10.1±3.1, "resorting to social support" was 7.4±2.2, "helpless approach" was 11.6±4.8, and "submissive approach" was 8.1±3.6.

**Conclusion:** A significant negative relationship was found between total prenatal self-evaluation and the "self-confident approach" and "optimistic approach", two effective methods for coping with stress. A significant positive relationship was found between total prenatal self evaluation and "helpless approach" and "submissive approach", two ineffective methods for coping with stress. While the use of "self-confident" and "optimistic" approaches result in better adaption to pregnancy, the use of ineffective methods decreases adaptation to pregnancy.

**Keywords:** Hyperemesis Gravidarum; Adapting to Pregnancy; Coping with Stress; Nursing

#### ÖZ

**Hiperemesis Gravidarum Tanısı Alan Gebelerin Gebeliğe Uyum ve Stresle Başa Çıkma Tarzlarının Belirlenmesi**

**Amaç:** Bu araştırma, Hiperemesis Gravidarum tanısı alan gebelerin gebeliğe uyum ve stresle başa çıkma tarzlarının belirlenmesi amacıyla yapılmıştır.

**Yöntem:** Tanımlayıcı olarak yapılan çalışma Hiperemesis Gravidarum tanısı alan ve bir kadın sağlığı eğitim ve araştırma hastanesinde yatan 160 gebe kadın ile gerçekleştirilmiştir. Araştırma için Etik Kurul onayı ve gerekli izinler alınmıştır. Verilerin toplanmasında, Tanıtıcı Bilgi Formu, Prenatal Kendini Değerlendirme Ölçeği (PKDÖ) ve Stresle Başa Çıkma Tarzları Ölçeği (SBTÖ) kullanılmıştır. Verilerin değerlendirilmesinde sayı, yüzde, ortalama, standart sapma, minimum ve maksimum değerler ve pearson korelasyon testi kullanılmıştır.

**Bulgular:** Bu çalışmada PKDÖ puan ortalaması 173,3±35,8, SBTÖ alt boyutları puan ortalamaları; "kendine güvenli yaklaşım" 14,5±4,5, "iyimser yaklaşım" 10,1±3,1, "sosyal desteğe başvurma" 7,4±2,2, "çaresiz yaklaşım" 11,6±4,8 ve "boyun eğici yaklaşım" 8,1±3,6 olarak saptanmıştır.

**Sonuç:** Toplam PKDÖ puan ortalamaları ile stresle başa çıkmada etkili yöntemlerden olan "kendine güvenli" ve "iyimser yaklaşım" arasında negatif doğrultuda anlamlı bir ilişki saptanırken, etkisiz yöntemler olan "çaresiz" ve "boyun eğici yaklaşım" arasında pozitif doğrultuda anlamlı bir ilişki saptanmıştır. Etkili yöntemlerden "kendine güvenli" ve "iyimser yaklaşım" kullanımı arttıkça gebeliğe uyum artmakta, etkisiz yöntemlerin kullanımı arttıkça gebeliğe uyum azalmaktadır.

**Anahtar Kelimeler:** Hiperemesis Gravidarum; Gebeliğe Uyum; Stresle Başa Çıkma, Hemşirelik

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## INTRODUCTION

Nausea and vomiting, frequently encountered in the first months of pregnancy, affect the daily life and reduce the quality of life of pregnant women (Ege and Eryılmaz 2000; Lacasse, Rey, Ferreira, Morin and Berard 2008). During the 8th through 12th weeks of gestation, 60-80% of pregnant women complain of nausea and vomiting (Hacker, Moore and Gambone 2004). Nausea and vomiting in pregnancy negatively affect physical activities, working life, psychological state, familial and social relations, sufficient nourishment, and health of the pregnant person (Ege and Eryılmaz 2000).

Pregnancy is a process where physiological, psychological, and social changes take place, which requires adaptation to these changes (Daş 2011). Women's adaptation to pregnancy can be affected by several variables. The first step in adapting to the role of motherhood is accepting the idea of pregnancy and integrating the situation of pregnancy into their lives (Saunders 2004). Age, receiving adequate prenatal care, social support, positive and negative role models, a planned pregnancy, number of pregnancies, sociocultural conditions, working conditions, and education level are some of the factors that affect accepting a pregnancy (Daş 2011; Demirbaş and Kadioğlu 2014; Yılmaz- Dereli and Beji-Kızılkaya 2010).

Hyperemesis-gravidarum (HG) is associated with insufficient nourishment arising from nausea and/or vomiting, 5% weight loss, dehydration, disordered acid-base balance, electrolyte imbalance, and ketonuria. Considering the impacts caused by HG, the importance of adaptation to pregnancy in HG comes to the foreground. Mutlugüneş and Mete (2013) examined the relationship between nausea, vomiting, and the role of motherhood and accepting the pregnancy. They found that as nausea and vomiting increase during pregnancy, acceptance of the pregnancy decreases. Chou, Avant, Kuo and Fetzer (2008) found that as the severity of nausea and vomiting increases, maternal psychosocial adaptation decreases.

According to Bayık, Özsoy-Altuğ, Ardahan, Özkahraman and İz-Başalan (2006), pregnancy ranks first among stressful life events experienced by women. Güleç, Öztürk, Şen and Güneri (2014) identified that pregnant women with HG have much more anxiety, depression, somatization, and hostility than pregnant women without Gümüşdaş, Apay-Ejder and Özorhan

(2014) found that anxiety features, stress features, and psycho-social support needs for risk pregnancies are higher. Considering even a normal pregnancy process may trigger stress, it is imperative to identify stress-coping methods for pregnant women hospitalized due to HG and who consequently are exposed to various hospital stressors.

For patients hospitalized with HG, identifying any associated physiological and psychological problems is important to increase the quality of care provided by the medical staff (Yanikkerem, İldan- Çalım, Göker, Oruç- Koltan and Koyuncu 2012). This research was conducted to identify adaptations to pregnancy and stress-coping methods used by those hospitalized due to HG. The data obtained in this study may be a guide for the services given during the care of patients with HG receiving treatment in health institutions. Helping pregnant women with HG develop strategies for coping with stress and preventing adaptation problems during pregnancy will enable both mother and fetus to have a healthier pregnancy.

## METHOD

**Study Design:** This research was descriptive with the purpose of determining adaptation to pregnancy and stress-coping methods used by those diagnosed with HG.

**Population and Data Collection:** The study was conducted using 160 pregnant women diagnosed with HG and hospitalized in a women's health training and research hospital in the Ankara province.

The population of the study is composed of pregnant individuals with the diagnosis of HG who were hospitalized in the relevant hospital. In order to determine the number of patients to include in the study, power analysis was performed using PASS 2008 software. Type I error probability ( $\alpha$ ) was identified as 0.05 and power ( $1-\beta$ ) as 0.80 in the analysis performed. Based on previous studies (Beydağ and Mete 2008), at least 85 patients are needed for a power of 0.82 when accepting the deviation as 5%.

### Inclusion criteria

- Age 18 and above
- Diagnosed with HG
- Volunteering
- Not having any pregnancy complication apart from HG
- Not having a chronic disease
- Not having a psychiatric problem
- Being open to verbal communication
- Not having a multiple pregnancy

**Data Collection Tools:** In the study, the Introductory Information Form, Prenatal Self-Evaluation Questionnaire, and Ways of Coping with Stress Inventory were used in face-to-face interviews. The data collection took approximately 15-20 minutes.

**Introductory Information Form:** The Introductory Information Form contained 16 items prepared by the researchers to identify the sociodemographic and obstetric features of the patients included in the study.

**Prenatal Self Evaluation Questionnaire (PSEQ):** The PSEQ was developed by Lederman in 1979 to determine a pregnant women's adaptation to motherhood. The questionnaire is a quartet Likert type scale composed of 79 items, with 47 items in the reverse direction. The validity and reliability study of the scale in Turkey was conducted by Beydağ and Mete. There are 7 sub-dimensions evaluated by PSEQ with regard to the adaptation to pregnancy: "accepting the pregnancy", "accepting the role of motherhood", "relationship with her mother", "relationship with her husband", "being ready to give birth", "fear of childbirth", and "opinions of the individual related to the health of herself and her baby". Adaptation to pregnancy is evaluated using points ranging from "4" to "1". The scoring is in reverse for the reverse-sided items. The minimum score is 79 and the maximum is 316. Low points indicate that the adaptation to pregnancy is high. Internal consistency Cronbach's Alpha coefficient of the scale is 0.81 and Cronbach's Alpha coefficients for the sub-dimensions are between 0.72 and 0.85 (Beydağ and Mete 2008). For this study, the PSEQ Cronbach's Alpha coefficient was 0.923 and the Cronbach's Alpha coefficients for the sub-dimensions were between 0.522 and 0.840.

**Ways of Coping with Stress Inventory (WCSI):** The WCSI scale was developed by Folkman and Lazarus (1984) and is frequently used in studies assessing the ability to cope with stress. It is a situation-oriented quartet Likert type scale composed of 66 items. WCSI was adapted to university students in Turkey by Şahin and Durak (1995). The scale is composed of 30 items and 5 sub-dimensions: "self-confident approach", "optimistic approach", "helpless approach", "submissive approach", and "resorting to social support". "Self-confident approach", "optimistic approach", and "resorting to social support" are the "effective methods" for coping with stress

## RESULTS AND DISCUSSION

According to sociodemographic features of the pregnant women with HG, 40.6% were aged

whereas "helpless approach" and "submissive approach" are the "ineffective methods" for coping with stress. The 1st and 9th questions are reverse graded on the questionnaire. The minimum and maximum points for the sub-scales are 0-21 for "self-confident approach", 0-15 for "optimistic approach", 0-24 for "helpless approach", 0-18 for "submissive approach", and 0-12 for "resorting to social support". The maximum points received in the sub-dimension reveal that the individual uses that approach frequently. The sub-dimension reliability coefficient of the scale ranges between  $\alpha=0.31$  and 0.83. When sub-dimensions are classified as effective and ineffective methods, Cronbach's Alpha coefficients are 0.82 for effective methods and 0.78 for ineffective methods (Şahin and Durak 1995). In this study, for effective methods, the Cronbach's Alpha coefficient was 0.812, whereas for ineffective methods the Cronbach's Alpha coefficient was 0.785.

In order to ensure the clarity of the questionnaire form, a preliminary assessment was performed using 10 pregnant women diagnosed with HG and hospitalized in the relevant hospital between July 5, 2015 and July 17, 2015. With the data obtained from the preliminary results, necessary adjustments were made to the questionnaire forms. The data obtained from the preliminary results were not taken into consideration for the data analysis. The total study was performed with 160 pregnant women with the diagnosis of HG hospitalized in a women's health training and research hospital in Ankara between July 18, 2015 and November 11, 2015.

**Data Analysis:** SPSS 15.0 package program was used in the analysis of the data. Number, percentage, average, standard deviation, minimum, and maximum values were used in the determination of the data. The suitability of the normal distribution of the data was evaluated using the Kolmogorov-Smirnov test. The Pearson correlation test was used for the evaluation of the relationship between variables.  $P<0.05$  was regarded statistically significant.

**Ethical Issues:** In order to conduct this study, the necessary permission was obtained with the Ethical Committee decision of Ankara University numbered 142 on May 7, 2015. Before the data collection forms were used, pregnant women were informed about the purpose of the research and written permission was obtained. 24 or lower, 34.4% were 25-29, and 25.0% were 30 and above. In the study, 16.9% of the women were primary school graduate, 62.5% were

secondary school graduates, and 87.5% had social security. A majority of the study group declared that they have an equal income level with their expenses (71.8%), were unemployed (82.5%), live in a nuclear family (70.6%), and live in the city center (70.0%). In our study population,

48.1% of the pregnant women with HG were experiencing their first pregnancies, 72.5% had a planned pregnancy, and 60.0% did not have a child. PSEQ and WCSI point averages of the pregnant women diagnosed with HG are indicated in Table 1.

**Table 1.** Distributions of Prenatal Self Evaluation Questionnaire and Ways of Coping with Stress Inventory point averages of pregnant women diagnosed with HG (n=160)

| Scales   | X±SS       | The minimum and maximum values | Lower and upper values pointed out |
|--|------------|--------------------------------|------------------------------------|
| <b>Prenatal Self Evaluation Questionnaire and Sub-dimensions</b>         |            |                                |                                    |
| Accepting the pregnancy  | 30.1±8.8   | 14-56                          | 14-56                              |
| Accepting the role of motherhood   | 27.4±8.9   | 15-60                          | 15-51                              |
| Relationship with her mother   | 17.9±7.8   | 10-40                          | 10-36                              |
| Relationship with her husband  | 18.8±7.2   | 10-40                          | 10-40                              |
| Being ready for giving birth   | 25.5±5.6   | 10-40                          | 10-37                              |
| Fear of childbirth   | 27.5±5.4   | 10-40                          | 11-39                              |
| Opinions of the individual related to the health of herself and her baby | 26.1±6.0   | 10-40                          | 12-38                              |
| <b>Total Prenatal Self Evaluation Questionnaire</b>                      | 173.3±35.8 | 79-316                         | 96-261                             |
| <b>Ways of Coping with Stress Inventory Sub-dimensions</b>               |            |                                |                                    |
| Self-confident Approach  | 14.5±4.5   | 0-21                           | 0-21                               |
| Optimistic Approach  | 10.1±3.1   | 0-15                           | 0-15                               |
| Resorting to Social Support  | 7.4±2.2    | 0-12                           | 1-12                               |
| Helpless Approach  | 11.6±4.8   | 0-24                           | 0-24                               |
| Submissive Approach  | 8.1±3.6    | 0-18                           | 1-18                               |

A significant negative relationship was found between total prenatal self evaluation and "self-confident approach" ( $r = -0.403$ ,  $p < 0.001$ ) and "optimistic approach" ( $r = -0.372$ ,  $p < 0.001$ ), which are two effective methods for coping with stress. A significant positive relationship was found between total prenatal self evaluation and "helpless approach" ( $r = 0.293$ ,  $p < 0.001$ ) and "submissive approach" ( $r = 0.196$ ,  $p = 0.013$ ), which are two ineffective methods for coping with stress (Table 2). The higher the frequency of the utilization of effective methods such as "self-confident approach" and "optimistic approach", the higher the adaptation to pregnancy. As the use of ineffective methods increase, pregnancy adaptation is decreased.

This comprehensive study used PSEQ with all its sub-dimensions and WCSI together. The data obtained in this study may guide the services

given for the care of pregnant women with HG receiving treatment in health institutions.

The PSEQ point average was 173.3±35.8 in our study (Table 1). Demirbaş and Kadioğlu (2014) found PSEQ average of 147.87±27.43 in their study conducted on 390 pregnant women who used six family health centers. The point averages in our study from the PSEQ and its sub-dimensions were higher than the point averages found in the study of Demirbaş and Kadioğlu (2014). Low points indicate a high level of adaptation to pregnancy. Thus, additional stress caused by the hospitalization due to HG may have increased our PSEQ average score. Mutlugüneş and Mete (2013) report when nausea and vomiting increase, the acceptance of pregnancy decreases. Kuo, Wang, Tseng, Jian and Chou (2007) compared mild, moderate, and severe nausea-vomiting with PSEQ and its sub-dimensions. They revealed that the level of "accepting the pregnancy" of the pregnant women with a severe level of nausea and

vomiting is less than those with mild and moderate levels of nausea and vomiting.

**Table 2.** The relationship between the point averages of Prenatal Self Evaluation Questionnaire and Ways of Coping with Stress Inventory

| Scales   |   | Self-confident Approach | Optimistic Approach | Resorting to Social Support | Helpless Approach | Submissive Approach |
|--|---|-------------------------|---------------------|-----------------------------|-------------------|---------------------|
| Accepting the Pregnancy  | r | <b>-,293</b>            | <b>-,345</b>        | 0,003                       | <b>,192</b>       | 0,119               |
|  | p | <b>&lt;0,001</b>        | <b>&lt;0,001</b>    | 0,971                       | <b>0,015</b>      | 0,133               |
| Accepting the role of motherhood   | r | <b>-,357</b>            | <b>-,331</b>        | -0,138                      | <b>,199</b>       | <b>,211</b>         |
|  | p | <b>&lt;0,001</b>        | <b>&lt;0,001</b>    | 0,082                       | <b>0,011</b>      | <b>0,007</b>        |
| Relationship with her mother   | r | <b>-,389</b>            | <b>-,266</b>        | -0,073                      | 0,151             | 0,146               |
|  | p | <b>&lt;0,001</b>        | <b>0,001</b>        | 0,361                       | 0,057             | 0,065               |
| Relationship with her husband  | r | <b>-,247</b>            | <b>-,202</b>        | <b>-,172</b>                | <b>,252</b>       | <b>,275</b>         |
|  | p | <b>0,002</b>            | <b>0,011</b>        | <b>0,030</b>                | <b>0,001</b>      | <b>&lt;0,001</b>    |
| Being ready for giving birth   | r | <b>-,231</b>            | <b>-,263</b>        | -0,044                      | 0,097             | 0,007               |
|  | p | <b>0,003</b>            | <b>0,001</b>        | 0,585                       | 0,221             | 0,930               |
| Fear of childbirth   | r | <b>-,296</b>            | <b>-,285</b>        | -0,067                      | <b>,165</b>       | -0,055              |
|  | p | <b>&lt;0,001</b>        | <b>&lt;0,001</b>    | 0,400                       | <b>0,037</b>      | 0,492               |
| Opinions of the individual related to the health of herself and her baby | r | -0,154                  | -0,127              | -0,107                      | <b>,428</b>       | <b>,200</b>         |
|  | p | 0,052                   | 0,109               | 0,179                       | <b>&lt;0,001</b>  | <b>0,011</b>        |
| <b>Total Prenatal Self Evaluation Questionnaire</b>                      | r | <b>-,403</b>            | <b>-,372</b>        | -0,119                      | <b>,293</b>       | <b>,196</b>         |
|  | p | <b>&lt;0,001</b>        | <b>&lt;0,001</b>    | 0,134                       | <b>&lt;0,001</b>  | <b>0,013</b>        |

With respect to the WCSI sub-dimension point averages, the "self-confident approach" was 14.5±4.5, "optimistic approach" was 10.1±3.1, "resorting to social support" was 7.4±2.2, "helpless approach" was 11.6±4.8, and "submissive approach" was 8.1±3.6 (Table 1). Elkin (2015) conducted a study using WCSI on 142 pregnant individuals registered in a health family center. In our study, the point averages for the effective methods in WCSI ("self-confident approach", "optimistic approach", and "resorting to social support") were higher than the point averages in Elkin's study (2015). This result might have arisen from the support received by our study group to use effective ways of coping with stress.

The implementation of the effective methods of "self-confident approach" and "optimistic approach" by the pregnant individuals increased whereas "accepting the pregnancy", "accepting the role of motherhood", "relationship with her mother", "relationship with her husband", "being ready to give birth", "fear of childbirth", and PSEQ total points (low

points for PSEQ indicate a high level of adaptation to pregnancy decreased (Table 2). If ineffective methods for coping with stress increased, then the adaptation to pregnancy decreased. Chou, Avant, Kuo and Fetzer (2008) conducted a study with 243 pregnant individuals and revealed if the stress perceived by a pregnant individual increases, maternal psychosocial adaptation decreases. Pregnancy is a stressful and complicated process, although it is not a health problem. In fact, pregnancy is one of the most stressful life events experienced by women Bayık, Özsoy-Altuğ, Ardahan, Özkahraman and İz-Başalan (2006). In high-risk pregnancies, the approach of nurses should be to evaluate the pregnant individual with a holistic approach, to meet their needs to adapt to their pregnancy, and to implement effective coping methods (Ölçer and Oskay 2015). Dağlar and Nur (2014) revealed that the risk of depression and the level of anxiety among pregnant individuals who implement ineffective stress-coping methods increases.

## CONCLUSION

In this study, the PSEQ point average was  $173.3 \pm 35.8$ , and the WCSI sub-dimension point average for "self-confident approach" was  $14.5 \pm 4.5$ , optimistic approach was  $10.1 \pm 3.1$ , "resorting to social support" was  $7.4 \pm 2.2$ , "helpless approach" was  $11.6 \pm 4.8$ , and "submissive approach" was  $8.1 \pm 3.6$ .

A significant negative relationship was found between PSEQ point average and "self-confident approach" and "optimistic approach", which are two effective methods for coping with stress. A significant positive relationship was identified between PSEQ point average and "helpless approach" and "submissive approach", which are two ineffective methods for coping

with stress. In accordance with the results of the study, we suggest the following:

-Provide assistance to pregnant women diagnosed with HG to help them adapt to pregnancy,

-Identify effective methods for coping with stress in HG and perform nursing initiatives accordingly,

-Conduct studies to assess the efficiency of nursing initiatives in coping with stress among pregnant individuals with HG,

-Ensure the development of social support for the pregnant individuals with HG during the pregnancy period,

-Research the different circumstances that affect adaptation to pregnancy among pregnant individuals.

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