THE RELATIONS AMONG PERSONALITY TRAITS, EMOTIONAL EXPRESSION, QUALITY OF LIFE AND ROMANTIC RELATIONSHIP SATISFACTION OF MIGRAINE PATIENTS: AN EMOTIONAL EXPRESSION GROUP THERAPY PRACTICE

PINAR KAYA KURTMAN

JULY 2017

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Approval of the Graduate School of Social Sciences

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ABSTRACT

THE RELATIONS AMONG PERSONALITY TRAITS, EMOTIONAL EXPRESSION, QUALITY OF LIFE AND ROMANTIC RELATIONSHIP SATISFACTION OF MIGRAINE PATIENTS: AN EMOTIONAL EXPRESSION GROUP THERAPY PRACTICE

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The main purpose of present dissertation is to investigate the predictive role of personality traits on quality of life and relationship satisfaction of migraine patients; and the moderator role of emotional expression of the patients in these relationships. In addition, the other purpose is to examine the effect of an emotional expression group psychotherapy in terms of emotional expression, quality of life and romantic relationship satisfaction of the migraine patients. Three studies were conducted in the scope of thesis. The purposes of Study 1 were adapting Migraine Specific Questionnaire (MSQ version 2.1) to Turkish and calculating its psychometric properties. Data for Study 1 and 2 was collected from 150 migraine patients who met the inclusion criterion of being married or having a romantic relationship at least for the last 6 months. Psychometric properties of MSQ (Version 2.1) was calculated in Study 1 which revealed good reliability and validity. Multiple moderation analyses

were conducted in Study 2. Different emotional expression styles moderated the association of personality characteristics and quality of life or relationship satisfaction. In addition, Study 3 included an intervention of emotional expression which was a psychoeducational group therapy for migraine patients. Only, woman migraine patients participated in 8 session of group therapy for Study 3 and data collected from them before and after the intervention. Related-samples Wilcoxon signed-rank test was conducted for Study 3. Results showed that group therapy elicited an increase in role function restriction scores when it was compared pre-post measurements. Results and their implications, as well as the strengths and limitations of the study, were discussed in the light of the literature.

Keywords: Migraine, Personality Characteristics, Emotional Expression, Quality of Life, Relationship Satisfaction

ÖZ

MİGREN HASTALARININ KİŞİLİK ÖZELLİKLERİ, DUYGU İFADELERİ, HAYAT KALİTELERİ VE İLİŞKİ DOYUMLARI ARASINDAKİ İLİŞKİ: DUYGU İFADESİ GRUP TERAPİSİ UYGULAMASI

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Bu doktora tezinin temel amacı kişilik özelliklerinin, migren hastalarının yaşam kalitesi ve romantic ilişki doyumları üzerindekisini araştırmak ve duygu ifadesisinin bu ilişkiler üzerindeki düzenleyici etkisini incelemektir. Bu çalışmanın diğer bir amacı ise duygu ifadesi ile ilgili grup terapisinin, migren hastalarının yaşam kaliteleri ve romantic ilişki doyumu üzerindeki etkisini incelemektir. Bu tez kapsamında üç çalışma yapılmıştır. Birinci çalışmanın amacı Migrene Özel Yaşam Kalitesi Ölçeğini (Versiyon 2.1) Türkçe 'ye adapte etmek ve psikometrik analizlerini yapmaktır. Birinci ve ikinci çalışmanın verisi, en az altı aydır evli ya da romantik ilişkisi olma kriterlerini karşılayan 150 migren hastasından toplanmıştır. Çalışma 1'de Migrene Özel Yaşam Kalitesi Ölçeğinin psikometrik özellikleri hesaplandığında, geçerli ve güvenilir olduğu görülmüştür. Çalışma 2'de çoklu moderasyon (düzenleyici) analizleri yapılmıştır. Farklı birçok duygu ifadesi tipi, kişilik özellikleri ve yaşam kalitesi ya da ilişki doyumu

değişkenleri arasındaki ilişkiyi modere (düzenlemiştir) etmiştir. Bunun yanında, Çalışma 3, migren hastalarını duygu ifadesi ile ilgili eğitmek amacıyla hazırlanan bir grup terapisi içermektedir. Sekiz seanslık grup terapisine dokuz kadın hasta katılmıştır ve terapinin öncesinde ve sonrasında onlardan veri toplanmıştır. Çalışma 3'te Wilcoxon İşaretli Sıra Testi analizi yapılmıştır. Sonuçlar, ön-son test karşılaştırması yapıldığında, duygu ifadesi grup terapisinin migrenin kişinin hayatını kısıtlama özelliğini azalttığı saptanmıştır. Tezin tüm sonuçları ve yorumları, çalışmanın güçlü yönleri ve kısıtlılıkları, literatür ışığında ele alınmıştır.

Anahtar Kelimeler: Migren, Kişilik Özellikleri, Duygu İfadesi, Yaşam Kalitesi, İlişki Doyumu

To My Beloved Family

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CHAPTER 1

GENERAL INTRODUCTION

Turkey is a collectivistic and traditional culture (Goregenli, 1997). In the traditional cultures, expression of emotions is not encouraged especially for adults. In this cases, people find a way to express their emotions. Bodily symptom is one of the ways of expressing emotions in the traditional cultures. Researchers stated that bodily symptoms cannot be differentiated from psychological disorders in the traditional cultures (Angel & Thoits, 1987). Particularly, a study conducted with Turkish immigrant women in Denmark, showed that only 8% of the participants reported themselves as healthy, the remaining had bodily symptoms. Headache constituted 56% of the reported bodily symptoms which was a quite high percentage (Mirdal, 1985). Bodily symptoms or somatization has become one of the most important elements of communication (Kirmayer & Young, 1998). Even it may have a key role for communication in traditional culture. The reasons of somatization's being a key factor of communication will not be examined in the current study. However, based on this information, migraine one of the most prevalent bodily expression in Turkish culture will be the focus. Migraine will be examined in terms of its role of replacement of an emotion. The mechanism under the replacement of a migraine to direct emotional expression will be examined detailed and a psychotherapeutic intervention will be proposed and applied in the present study.

To sum, the current dissertation will provide detailed information about the relations among personality traits, the role of emotional expression, and their effects on quality of life (QOL) and relationship satisfaction of migraine patients. Based on the

information from the study mentioned above, a treatment will be applied for the patients.

To conclude, the most important concern of the current dissertation is providing a valuable contribution to migraine literature and practice in Turkey. Since living in a traditional culture made people inhibit or exhibit indirectly their real emotions and this make them suffer from many kinds of bodily symptoms. Therefore, if this emotional non-expression and bodily symptoms affect people this much, proposing and providing a solution to this will be helpful for the patients and their families.

1.1 Migraine

Migraine is defined as " a decapitating chronic condition with unpredictable, episodic, painful, throbbing headaches that may be accompanied by nausea, vomiting, photophobia and phonophobia" (Martin et al., 2000, p. 204). Migraine is known as the most ill-famed among the vascular headaches and it is hypothesized that migraine headache causes alterations in constriction of the vascular arteries and leads to throbbing unilateral pain (Brannon &Feist, 2014).

Migraine is listed as the third common disease in both males and females around the world by The Global Burden of Disease Survey 2010 (GBD 2010), a study conducted by the World Health Organization (WHO) (GBD, 2010 as cited in (Steiner, Stovner, & Birbeck, 2013; GBD, 2010 as cited in Vos et al., 2012) Worldwide, 46% of adult population suffer from active headache disorder in general; specifically 11% of adult population suffer from migraine. According to European and American studies, each year 6-8% of men and 15-18% of women experience migraine attacks. These numbers are even higher in Turkey; 8.5% of men and 24.6% of women in Turkey suffer from migraine headaches (Ertas et al., 2012). For women, the prevalence rate of migraine increases after puberty until about age of 40, and then it declines (Silberstein, 2004). For both sexes, the prevalence rates are the highest between the ages of 30-39, and lowest after the ages of 60 (Lipton et al., 2007).

1.2 Illness-Related Characteristics of Migraine

Migraine has two sub-types which are migraine without aura and migraine with aura. Migraine without aura is characterized by 4-72 hours lasting, unilateral located, pulsating, moderate or severe intensity headache, which is intensified by physical and daily activity and associated with nausea, vomiting, photophobia, and phonophobia. Migraine with aura is constituted by visual and/or sensory and/or speech/language symptoms without motor weakness, and symptoms do not last longer than 1 hour (Headache Classification Committee of the International Headache Society (IHS), 2013). More than half of the migraine patients (63%) experience attacks 1-4 days of a month (Lipton et al., 2007). Duration of migraine attacks can vary from a few hours to three days, and during this period patients may have gastrointestinal complaints and hypersensitivity to light and sound (Macrae, 2007).

The frequency, severity, and duration of the migraine attacks are crucial in determining the degree of negative influence of these attacks on patients' lives. Being more frequent, severe, and long lasting make migraine attacks even more unbearable and create more disabilities for migraine patients (G. Tkachuk, Cottrell, Gibson, O'Donnell, & Holroyd, 2003). Therefore, Leonardi, Raggi, Bussone, and D'Amico (2010) stated that the more severe the migraine attacks, the worse the quality of life of the patients. Moreover, (Dahlof & Solomon, 1998) stated that frequency and duration of the migraine attacks determined the disability of the patients. It was clear that the longer the migraine episode takes and the more frequent, the greater the disabilities it creates in daily life.

1.3 The Aims and Organization of the Current Dissertation

The general aim of the current dissertation was to examine migraine from a psychological point of view. In order to achieve this aim, three studies were conducted. The specific aims of these studies were as follows: (1) Study 1 was conducted to adapt Migraine Specific Quality of Life Questionnaire (Version 1.2)

into Turkish to be able to use it as one of the assessment tools in Study 2, (2) Study 2 aimed at finding the associations among, personality characteristics, emotional expression, quality of life, and relationship satisfaction in Turkish married or in a romantic relationship patients suffering from migraine. (3) The main goal of Study 3 was to develop and implement a group psychotherapy and examine its effectiveness on quality of life of migraine patients.

Chapter 1 was the general introduction of the current dissertation. Chapter 2 included the literature review, aims, hypotheses, method, result and discussion of Study 1. In Chapter 3, literature review, aims, hypotheses, method, result and discussion of Study 2 were presented. Chapter 4 covered literature review, aims, hypotheses, method, result and discussion of Study 3.

CHAPTER 2

STUDY 1: ADAPTATION, RELIABILITY, AND VALIDITY STUDY OF MIGRAINE-SPECIFIC QUALITY OF LIFE QUESTIONNAIRE (MSQ VERSION 2.1)

2.1 Literature Review of Study 1

Headache is a very common disease around the world, and thus, researchers paid great attention to it. Measurement of quality of life is one of the key factors to find out the psychological and social outcomes of headaches. Researchers need to figure out the reasons how and in what respects headache restricts patient's life especially for developing and implementing interventions. Therefore, it is important to develop and administer questionnaires measuring the quality of life (QOL) of the chronic headache patients.

Headache Scale (Hunter, 1983) was one of the oldest questionnaires developed for the assessment of QOL of headache patients through measuring pain quality and intensity of headache. The main purpose of Headache Scale was to close the deficit of former questionnaire called McGill Pain Questionnaire (MPQ), developed by Melzack (1983). McGill Pain Questionnaire was criticized as not being precise and objective enough, hence Headache Scale was developed by revising MPQ (Hunter, 1983). Although, Headache Scale provided both qualitative and quantitative information about headache pain, it was not sufficient to differentiate different types of headaches from each other.

Pain Behavior Questionnaire (PBQ), originally developed by Philips and Hunter (1981), aimed to assess different types of headaches, such as migraine, tension-type and mixed headache in terms of pain and pain behaviors. In addition, it focused on the effects of headache on patients' lives (Appelbaum, Radnitz, Blanchard, & Prins,

1988). Headache Disability Inventory (HDI), another questionnaire assessing the same construct with Headache Scale, MPQ, and PBQ, was designed to measure short-term effects of migraine disability and perception of spouses of patients (Jacobson, Ramadan, Norris, & Newman, 1995).

In addition to questionnaires that assess the short-term effects of acute migraine, there were other questionnaires measuring the well-being of migraine patients between the attacks. The Minor Symptoms Evaluation Profile (MSEP) (Dahlöf, 1990), the Subjective Symptom Assessment Profile (SSAP) (Dalhof & Dimenas, 1995), and the Psychological General Well-Being (PGWB) (Grossi & Compare, 2014) are some of the examples for the questionnaires mentioned above (Dalhof & Dimenas, 1995).

For measuring the quality of life (QOL) of chronically ill patients, the most widely used questionnaire is Medical Outcome Study (MOS) Short Form Health Survey, SF-36 Short Form (as cited in Solomon, 1997). SF-36 was developed according to the results of Medical Outcome Study. Firstly, 20-item version was developed then 36-item version started to be used. Both versions are used to measure QOL in wide-range of chronic illnesses (Solomon, 1997), including headache (Solomon, Skobieranda, & Gragg, 1993). However, SF-36 could not differentiate the migraine from other headache types. Similarly, Headache Impact Test (HIT-6) (Nachit-Ouinekh et al., 2005) and Comprehensive Headache-Specific Quality of Life Questionnaire (Manhalter, Bozsik, Palásti, Csépány, & Ertsey, 2012), assessment tools that have been developed recently, were also not specific to migraine.

To conclude, there have been many assessment tools to measure the quality of life of chronically ill patients including the ones suffering from headache. However, until recently, there was no QOL measure developed specifically for migraine patients.

2.1.1 Migraine Specific Quality of Life Questionnaire (Version 2.1)

Since the measurement tools mentioned above were inadequate to fully apprehend all domains of QOL in migraine patients, three different migraine specific quality of life questionnaires, namely, the Migraine-Specific Quality of Life (MSQOL) (Wagner, Patrick, Galer, & Berzon, 1996) a brief 24-hour Migraine-Specific QOL Questionnaire (MQoLQ) (Hartmaier, Santanello, Epstein, & Silberstein, 1995), and Migraine-Specific Quality-of-Life Questionnaire (MSQ Version 1.0) (Jhingran, Davis, LaVange, Miller, & Helms, 1998), were developed. The first measure, MSQOL, was developed to measure the longer-term effects of migraine on patients' quality of life. In other words, it was not designed to measure the quality of life of the migraine patients in a specified time, i.e., just before the migraine attack or between attacks (Wagner et al., 1996). The other measurement tool, Brief 24-hour Migraine-Specific Quality of Life Questionnaire, was developed to understand the short-term quality of life of patients after acute migraine attacks. This questionnaire had five different domains namely, work functioning, social functioning, energy/vitality, migraine headache symptoms, and feeling and concerns, and it considered these for acute migraine attacks and their short-term effects (Hartmaier et al., 1995). The last measure, Migraine-Specific Quality-of-Life Questionnaire (MSQ) (Version 1.0), was developed to assess quality of life of migraine patients for longer durations but over a specified time period, i.e., 4 weeks. MSQ (Version 1.0) had three domains, which were role restrictive (RR), role preventive (RP), and emotional unction (EF) (Jhingran et al., 1998; Jhingran, Osterhaus, Miller, Lee, & Kirchdoerfer, 1998). Although psychometric properties of MSQ (Version 1.0) was satisfactory, MSQ (Version 2.0) was developed with the help of the feedbacks of professionals and patients. There were several aims of developing the second version of MSQ; decreasing uncertainty of the items, improving discriminant and convergent validity, and standardizing response categories into 6-point Likert-type-scale. After developing Version 2.0, researchers recognized that 14-item version of MSQ enhanced factor structure compared to original 16-item MSQ (Version 2.0). Therefore, researchers ended up with the 14-item version (Version 2.1), which is

widely used in the literature to assess the long-term quality of life of migraine patients over four-week-period (Martin et al., 2000).

2.2 Aims and Hypotheses

The aims and hypothesis of the current study will be demonstrated and explained in the following sections.

2.2.1 Aims of the Study 1

According to the literature stated above, MSQ (Version 2.1) is an important assessment tool to measure quality of life specific to migraine. To the best of my knowledge, there is no other questionnaire assessing long-term effects of migraine on QOL of migraine patients, particularly in Turkish language. Thus, adapting MSQ (Version 2.1) into Turkish has a vital role both for the current dissertation and the other migraine research that will be conducted in the future in Turkey. The aim of the Study 1 was to translate MSQ (Version 2.1) into Turkish and to examine its factor structure, reliability and validity using a Turkish sample.

2.2.2 Research Hypotheses

The hypotheses of Study 1 are as follows:
(1) Factor analysis will reveal three factors for Turkish MSQ (Version 2.1).
(2) Turkish MSQ (Version 2.1) will have acceptable internal consistency reliability values.
(3) Turkish MSQ (Version 2.1) will have acceptable convergent, divergent, and criterion-related validity values.

2.3 Method

The participants of the study, sample characteristics, measures of the study and procedure will be discussed in the following sections.

2.3.1 Participants

The participants of this study were 150 migraine patients who met the inclusion criterion of being married or having a romantic relationship at least for the last 6 months. In addition, participants were selected according to the criteria of official diagnosis and in this respect declarations of participants are taken as a basis. One participant was excluded from the Study 1 owing to not responding one of the questionnaires. The study continued with 149 participants. Of the 149 participants, 120 were women (80.5 %), 25 were men (16.8 %), and 4 participants did not indicate their gender (2.7%).

Forty-two participants (28.2 %) failed to write their age while filling out the hard copies of the questionnaires. The age range of the remaining 107 participants (71.3 %) was between 18 and 64 with a mean of 32.89 (*SD* = 10.72). The majority of the participants reported their perceived income as middle (*n* = 130, 87.2%). In addition, 9 participants (6 %) perceived themselves in low income group and 8 of them (5.4 %) perceived themselves in high income group. More than half of the sample consisted of participants with undergraduate degree (*n* = 86, 57.7%); 36 of the remaining participants had graduate degree (24.2 %) and 26 of them had high school degree (17.4 %) at most. The distribution of the participants according to the residence where they had grown up was as follows: 66 of them grew up in metropolis (44.3 %), 50 of them grew up in a city (33.6 %), and 31 of them grew up in a village, town or county (20.8 %). Finally, the relationship status of the participants was as follows: 85 of the participants (57 %) had been married at least for the last 6 months, and 63 of them (41.6 %) had had a romantic relationship at least for the last 6 months (See Table 2.1 for the demographic characteristics of the sample).

Table 2.1 *Demographic Characteristics of the Sample of Study 1*

	M	*SD*	*n*	*%*	*Min-Max*
Gender					
Female			120	80.5	
Male			25	16.8	
Age	32.89	10.72			18-64
Income					
Low			9	6	
Middle			130	87.2	
High			8	5.4	
Education					
High School and Lower			26	17.4	
University			86	57.7	
Graduate			36	24.2	
Hometown Residence					
Village/Town/Country			31	20.8	
City			50	33.6	
Metropolis			66	44.3	
Relationship Status					
Married			85	57	
Romantic Relationship			63	41.6	

Time since diagnosis varied between the 2 months and -420 months (M = 99.38, SD = 94.05). In addition, the frequency of the migraine attacks for the last three months differed between 0-90 days with a mean of 11.15 (SD = 10.20), and the duration of their migraine attacks was between 0-720 hours with a mean of 30.15 (SD = 68.76). While participants evaluated the severity of their migraine attacks on a 10-point scale with a mean of 6.92 (SD = 1.98); and similarly, on a 10-point scale they reported their perceived control over the attacks with a mean of 4.58 (SD = 2.35). Moreover, 75.8 % of the participants (n = 113) stated that they had no other physical illness, while 22.8 % of them (n = 34) had at least one more physical illness except for migraine. Finally, 8.1 % of the sample (n = 12) reported a psychological disorder,

and 90.6 % of them (*n* = 135) reported no psychological disorder (see Table 2.2 for the illness-related characteristics of the sample).

Table 2.2 *Illness-Related Characteristics of the Sample of Study 1*

		M	*SD*	*n*	*%*	*Min-Max*
Time Since Diagnosis (months)		99.38	94.05			2-420
Frequency (days)		11.15	10.20			0-90
Severity		6.92	1.98			1-10
Controllability		4.58	2.35			1-10
Duration (hours)		30.15	68.76			0-720
Physical Illness						
	Yes			34	22.7	
	No			114	76	
Psychological Disorder						
	Yes			12	8.1	
	No			135	90.6	

2.3.2 Measures

2.3.2.1 Demographic Information Form (DIF)

Demographic Information Form (DIF) included questions on gender, age, income, relationship status, hometown residence and absence-presence of any physical and psychological disorder.

In order to determine the illness-related characteristics of the participants, frequency, severity, duration and controllability of migraine attacks were asked to the participants by following questions; “Frequency: On how many days in the last 3 months did you have headache? (If the headache attack lasted more than 1 day, count each day.)”, “Severity: On a scale of 0 - 10, on average how painful were these headaches? (Where 0 = no pain at all, and 10 = pain as bad as it can be.)”, “Duration:

Once the headache started, for how long have you had it?", "Controllability: How controllable do you think your migraine attacks are?" (see Appendix A).

2.3.2.2 Migraine Specific Questionnaire (MSQ version 2.1)

Migraine Specific Questionnaire Version 1.0 was developed by Jhingran et al., (1998) (Glaxo Welcome Inc.) and it aimed at measuring the migraine patients' long-term quality of life over a specified time period (4 weeks). Its psychometric properties were acceptable. Martin and friends, (2000) revised the Migraine Specific Questionnaire and developed the version 2.1. In this revised questionnaire, there were three dimensions namely Role Restrictive (RR), Role Preventive (RP), and Emotional Function (EF). Role Restrictive dimension determines which performances of normal activities are limited by migraine, and its Cronbach alpha coefficient was .96. Role Preventive dimension assesses degree to which performance of normal activities is interrupted by migraine, and its Cronbach alpha coefficient was .93. The last dimension was Emotional Function and it measures the emotional influences of migraine such as feeling of frustration and helplessness, and its Cronbach alpha coefficient was .86. In the present study, the internal consistency reliabilities of the subscales as calculated by Cronbach's alpha were .95 for role-function restrictive subscale, .92 for role-function preventive subscale, and .84 for emotional function subscale (see Appendix C).

2.3.2.3 The MOS 36 Item Short Form Health Survey (SF 36)

SF-36 was developed by McHorney, Ware, Rachel Lu, and Sherbourne, (1994) in order to determine the health status of the participants. It was translated into Turkish by Fişek in 2002 (as cited in Pınar, 2005), but its psychometric properties were assessed by (Pinar, 2005). It has 8 dimensions namely, physical functioning, physical role, bodily pain, general health perception, vitality, social functioning, role-emotional, and mental health. Their internal consistency coefficients are as follows respectively; .90, .87, .86, .79, .87, .84, .82, .82. SF-36 could be evaluated in eight

dimensions as mentioned above or two main dimensions which are physical health and mental health. In the current study, two main dimension was taken into consideration and their internal consistency coefficients were calculated. Cronbach's alphas of physical health and mental health were .89 and .90 respectively (see Appendix D).

2.3.2.4 Positive and Negative Affect Schedule (PANAS)

It was developed by (Watson, Clark, & Tellegen, 1988) and adapted to Turkish by (Gençöz, 2000). It is aimed at measuring the affective state of the participants for last two weeks. It has two dimensions namely positive affect and negative affect. It has 10 items per dimension and total 20 items rated on 5-point Likert-type scale. Internal consistency coefficient of positive affect dimension is .83 and .86 for negative affect and test re-test reliability coefficients are .40 and .54 respectively. In the present study, Cronbach's alpha internal consistency reliability of positive affect dimension was .87 and negative affect dimension was .89 (See Appendix E).

2.3.3 Procedure

Firstly, necessary permissions were received from GlaxoSmithKline Group of Companies who have the copyright of Migraine-Specific Quality of Life Questionnaire-v2. Then, ethical approval was obtained from Middle East Technical University ethical committee. After all the permissions were completed, questionnaire booklet was prepared both electronically and as hard copy. Electronic copy was prepared via Qualtrics, online survey program. Nearly half of the data was gathered from Qualtrics, and the other half was obtained from the students attending to a course in psychology department at Middle East Technical University or their connections. Individuals, who met the inclusion criteria, which were being diagnosed with migraine, and being married or having a relationship for at least 6 months, participated in the study. Participants were selected according to the criteria of official diagnosis. Declarations of participants are taken as basis. Before

answering the questions, they were given an informed consent. The informed consent form included information about the study and participants' rights (see Appendix A). The participants completed the questionnaires was approximately in 35-40 minutes.

2.4 Results

Principal Component Factor Analysis with Varimax Rotation was applied to fourteen items of the MSQ (Version 2.1) in order to determine its factor structure. Using Kaiser Criterion, the results indicated three factors with eigenvalues greater than 1. Obtained three factors explained 79.25% of the variance. Extraction communalities ranged from .69 to .87.

The 7-item first factor was named as Role-Function Restrictive. Eigenvalue of the first factor was 5.13 (Cronbach's α = .95). This factor explained 36.64 % of the total variance. The four-item second factor was called Role-Function Preventive and it explained 24.54 % of the total variance. Eigenvalue of the second factor was 3.44 (Cronbach's α = .91). The 3-item last factor was called Emotional Function and its eigenvalue was 2.53. The third factor explained the 18.08 % of the total variance (Cronbach's α = .83). The results of the factor analysis revealed that MSQ (Version 2.1) had construct validity (See Table 2.3).

Table 2.3 *Factor Structure and Loadings of Migraine Specific Quality of Life Scale (Version 2.1)*

Item	Factor 1	Factor 2	Factor 3
3. In the past 4 weeks, how often have migraines interfered with how well you dealt with family, friends and others who are close to you?	**0.84**	0.31	0.19
2. In the past 4 weeks, how often have migraines interfered with your leisure time activities, such as reading or exercising?	**0.82**	0.26	0.28
4. In the past 4 weeks, how often did migraines keep you from getting as much done at work or at home?	**0.80**	0.41	0.24
5. In the past 4 weeks, how often did migraines limit your ability to concentrate on work or daily activities?	**0.76**	0.38	0.30
1. In the past 4 weeks, how often have migraines interfered with how well you dealt with family, friends and others who are close to you	**0.75**	0.34	0.13
6. In the past 4 weeks, how often have migraines left you too tired to do work or daily activities?	**0.64**	0.47	0.33
10. In the past 4 weeks, how often did you have to stop work or daily activities to deal with migraine symptoms?	0.58	**0.56**	0.29
7. In the past 4 weeks, how often have migraines limited the number of days you have felt energetic?	**0.57**	0.55	0.32
12. In the past 4 weeks, how often have you felt fed up or frustrated because of your migraines?	0.50	0.48	**0.49**
11. In the past 4 weeks, how often were you not able to go to social activities such as parties, dinner with friends, because you had a migraine?	0.36	**0.80**	0.26
8. In the past 4 weeks, how often have you had to cancel work or daily activities because you had a migraine?	0.54	**0.72**	0.17
9. In the past 4 weeks, how often did you need help in handling routine tasks such as every day household chores, doing necessary business, shopping, or caring for others, when you had a migraine?	0.37	**0.71**	0.40
13. In the past 4 weeks, how often have you felt like you were a burden on others because of your migraines?	0.16	0.31	**0.86**
14. In the past 4 weeks, how often have you been afraid of letting others down because of your migraines?	0.27	0.16	**0.85**

Note. Factor 1: Role-function restrictive; Factor 2: Role-function preventive; Factor 3: Emotional function

2.4.1 Internal Consistency Reliability of MSQ (Version 2.1)

Cronbach's alpha internal consistency reliability of total MSQ (Version 2.1) was .961. Reliability analysis results of total MSQ (version 2.1) can be seen in Table 2.4 and also reliability analyses of the subscales of MSQ (Version 2.1) can be seen in Table 2.5.

Table 2.4 *Reliability Analysis of Migraine Specific Quality of Life Questionnaire (MSQ version 2.1)*

Item	*M*	*SD*	α if Item Deleted	Item Total Correlations
1	50.42	215.15	0.96	0.73
2	50.76	210.00	0.96	0.81
3	50.72	209.85	0.96	0.81
4	50.65	207.63	0.96	0.87
5	50.72	210.29	0.96	0.85
6	50.62	207.79	0.96	0.83
7	50.74	211.05	0.96	0.82
8	50.03	208.71	0.96	0.83
9	50.30	206.92	0.96	0.80
10	50.19	210.51	0.96	0.82
11	50.08	208.42	0.96	0.78
12	50.87	207.39	0.96	0.81
13	49.54	215.06	0.96	0.63
14	49.75	212.41	0.96	0.61
Total questionnaire	54.26	242.92		

Note. Cronbach's alpha reliability of the total questionnaire was .96.

Table 2.5 *Reliability Analysis of Sub-scales of Migraine Specific Quality of Life Questionnaire (MSQ version 2.1)*

Item	*M*	*SD*	α if Item Deleted	Item Total Correlations
Role-Function Restrictive				
1	21.35	49.86	0.95	0.75
2	21.68	47.39	0.94	0.83
3	21.65	47.00	0.94	0.86
4	21.58	46.26	0.94	0.90
5	21.65	47.72	0.94	0.87
6	21.54	47.02	0.94	0.82
7	21.67	48.83	0.95	0.78
Total Sub-Scale	25.19	64.42		
Role-Function Preventive				
8	12.22	14.04	0.87	0.85
9	12.48	13.89	0.90	0.78
10	12.38	14.94	0.89	0.79
11	12.26	13.91	0.89	0.80
Total Sub-Scale	16.44	24.53		
Emotional Function				
12	9.24	7.56	0.83	0.64
13	7.90	7.05	0.71	0.76
14	8.12	6.54	0.77	0.70
Total Sub-Scale	12.53	14.64		

Note. Cronbach's alpha reliabilities of the subscales were .95, .92 and. 84, respectively.

2.4.2 Convergent Validity of MSQ (Version 2.1)

In order to test convergent validity of MSQ (Version 2.1) and its subscales (Role-Function Restrictive, Role-Function Preventive, and Emotional Function), correlation coefficients of them with physical health and mental health subscales of SF-36 were examined. According to the results, physical health subscale of The MOS 36 Item Short Form Health Survey (SF 36). (SF-36) was significantly and

positively correlated with MSQ total (r = 0.67, p < .01), role-function restrictive (r = 0.58, p < .01), role-function preventive (r = 0.65, p < .01), and emotional function (r = 0.61, p < .01). In addition, mental health subscale of SF-36 was also significantly and positively correlated with MSQ total (r = 0.43, p < .01), role-function restrictive (r = 0.35, p < .01), role-function preventive (r = 0.43, p < .01), and emotional function (r = 0.40, p < .01) (see Table 6). To sum up, this results showed that the higher the migraine specific quality of life, the better general physical health and mental health.

2.4.3 Divergent Validity of MSQ (Version 2.1)

In order to test the divergent validity of MSQ (Version 2.1) and its subscales, their correlation coefficients with negative affect (NA) subscale of PANAS were examined. According to the results, NA significantly and negatively correlated with MSQ total (r = -0.22, p < .01), role-function-preventive (r = -0.20, p < .05), and emotional function (r = -0.25, p < .01). However, NA was not significantly correlated with role-function restrictive (r = -0.13, n.s) (see Table 2.6).

Table 2.6 *Correlations of the MSQ and its Subscales with the Scales Used for Convergent Validity and Divergent Validity*

	MSQ (Total)	RFR	RFP	EF	PH	MH	NA
MSQ (Total)							
RFR	.93**						
RFP	.94**	.86**					
EF	.89**	.71**	.73**				
PH	.67**	.59**	.65**	.61**			
MH	.43**	.35**	.43**	.40**	.62**		
NA	-.22**	-.13	-.20*	-.25**	-.30**	-.52**	

*Note 1. *p < .05, **p < .01*
Note 2: MSQ: Migraine Specific Quality of Life Scale, RFR: Role-Function Restrictive, RFP: Role-Function Preventive, EF: Emotional Function, PH: Physical Health, MH: Mental Health, NA: Negative Affect

2.4.4 Criterion-Related Validity of MSQ (Version 2.1)

Finally, in order to test the criterion-related validity of MSQ, data was divided into two in terms of severity of the migraine via median split. Multivariate Analysis of Variance (MANOVA) was used in order to compare participants with high level of perceived severity of migraine with participants with low level of perceived severity of migraine in terms of migraine specific quality of life. Bonferroni correction was done and .0125 significance level value was used for the analysis. Multivariate analyses was significant [Multivariate $F(3, 104) = 9.20$, $p < .001$, Wilks' $\lambda = .79$, partial $\eta^2 = .21$]. According to the univariate results, role function restriction of migraine was significantly different between the participants with high and low levels of perceived severity of migraine [F (1, 106) = 23.12, $p < .001$; partial $\eta^2 = .18$]. Similarly, role function prevention of migraine found to be significantly different between high and low levels of perceived severity of migraine [F (1, 106) = 16.64, $p < .001$; partial $\eta^2 = .14$]. Emotional function of the participants was also significantly different between high and low perceived severity groups [$F(1, 106) = 23.16$, $p< .001$; partial $\eta^2 = .18$]. Lastly, total migraine specific quality of life of the participants significantly differed between the levels of high and low perceived severity of migraine [$F(1, 106) = 24.43$, $p< .001$; partial $\eta^2 = .19$]. In other words, participants with higher perceived severity of migraine ($M = 43.16$, $SD = 22.51$) had less role-function restrictive scores than participants with less severe migraine ($M = 63.70$, $SD = 43.16$). Participants with higher perceived severity of migraine ($M = 53.16$, $SD = 24.27$) had also less role-function preventive scores than the participants who had less perceived severity of migraine ($M = 71.96$, $SD = 23.52$). Similarly, participants with more severe migraine ($M = 52.05$, $SD = 26.26$) had also less emotional function scores than the participants who had lower perceived severity of migraine ($M = 74.77$, $SD = 22.36$). When the total MSQ score was examined, again the similar effect was observed and participants with higher perceived severity of migraine symptoms ($M = 148.36$, $SD = 68.29$) had lower migraine specific quality of life scores than participants with less severe migraine symptoms ($M = 210.43$, $SD =$

61.44). These results revealed that Turkish adaptation of MSQ (Version 2.1) had criterion-related validity (see Table 2.7).

Table 2.7 *MANOVA Results for Participants with High and Low Severity of Migraine*

	High Severity		Low Severity		Significance Test
	m	*sd*	*m*	*sd*	
Quality of Life	Multivariate $F(3, 104) = 9.20$, $p < .001$, Wilks' $\lambda = .79$, partial $\eta^2 = .21$				
MSQ (Total)	148.36	68.29	210.43	61.44	$F(1, 106) = 24.43$*
RFR	43.16	22.51	63.70	43.16	$F(1, 106) = 23.12$*
RFP	53.16	24.27	71.96	23.52	$F(1, 106) = 16.64$*
EF	52.05	26.26	74.77	22.36	$F(1, 106) = 23.16$*

Note. *$p < .001$

2.5 Discussion

The purpose of this study was to adapt MSQ (Version 2.1) into Turkish and to examine its factor structure, reliability and validity in a sample of Turkish migraine patients. MSQ (Version 2.1) is a questionnaire assessing migraine specific quality of life. The original English version has three dimensions namely role-function restrictive (RFR), role-function preventive (RFP), and emotional function (EF). According to our results, factor structure of the Turkish version demonstrated acceptable fit to the factor structure of the original version (Martin et al., 2000) and it yielded three factors.

Regarding reliability, internal consistency reliability analysis was conducted for subscales and total scale. Turkish version revealed high reliability scores for RFR, RFP, and EF subscales and total scale; however, it was slightly lower than the original one (Martin et al., 2000). In the original version, migraine specific quality of life was measured by the scores of three subscales. Therefore, it is recommended that Turkish version should also be used with subscale scores, without total score calculation.

Three validity tests were conducted, namely convergent, divergent, and criterion-related validity. In order to test convergent validity, correlations of RFR, RFP, and EF with physical and mental health subscales of SF 36 were calculated. According to the results, all of the three subscales of MSQ were positively correlated with physical and mental health. Correlation coefficients of RFR, RFP, EF with mental health were moderate and consistent with the original study (Martin et al., 2000). However, RFR, RFP, and EF were more strongly correlated with physical health than mental health, which was partly inconsistent with the original MSQ study In the original study, RFR and RFP were more strongly correlated with physical health than mental health; however, EF was more strongly correlated with mental health than physical health (Martin et al., 2000).The reason why the correlations between EF and mental health was lower than the correlation between EF and physical health, might be the patients' denial of their emotions. Consistent with the findings of Study 2 and Study 3 of the current dissertation, migraine patients had a tendency not to process their emotions actively. Study 2 and Stud 3 showed that they experience their feeling; however, they could not actively face and process them. Using passive aggression as an anger expression was an example of this tendency. These findings might imply that migraine patients might perceive that EF subscale questions did not ask their emotion. To illustrate, when they saw the following question "Son 4 hafta içerisinde, migreniniz nedeniyle hangi sıklıkta kendinizi bıkkın ve yılgın hissettiniz?", they might perceive it as a health-related question rather than an emotional question. This might be the reason of the inconsistency of the current finding and the literature in terms correlations between EF and mental health.

Regarding divergent validity, the correlation coefficients were calculated between RFR, RFP, EF and negative affect (NA) subscale of PANAS. According to the results, NA was significantly and negatively correlated with RFP and EF. This finding was parallel to other findings in the literature. For example, a study stated that emotional disturbance and severity of migraine were related to each other (Pearce, 1977).

Regarding the criterion-related validity, patients with low and high perceived severity of migraine were compared in terms of RFR, RFP, and EF. According to results, migraine patients with high severity had less RFR, RFP, and EF compared to migraine patients with low severity in line with the expectations. This results suggested that higher severity of the migraine affected the quality of life negatively consistent with the literature (Leonardi et al., 2010; Tkachuk et al., 2003).

In sum, Turkish version of MSQ (Version 2.1) was accepted to have good internal consistency reliability, construct validity (convergent and divergent validity), and criterion-related validity.

2.5.1 Strength and Limitations of the Study; Suggestions for the Future Studies

The present study was to first to translate and examine the psychometric properties of MSQ (Version 2.1) into Turkish. It was also the first quality of life questionnaire specific to migraine adapted to Turkish language. Moreover, psychometric properties of the Turkish version were quite acceptable. Thus, current study made a contribution to Turkish migraine literature. One of the most important strength of this study was that the sample was clinical. Additionally, wide age range, income, and education level of the participants made this study more generalizable.

The current study was not without its limitations. One of them was that the participants were selected with their own declaration of having diagnosed with migraine. In future studies, participants with official migraine diagnosis might be recruited with the help of medical professionals. Another limitation of the study was that there were more female than male participants in the current study. This prevented to compare two groups. However, this situation was in line with the previous studies in Turkey stating that migraine is more prevalent among women (Ertas et al., 2012).

CHAPTER 3

STUDY 2: THE PREDICTIVE ROLE OF PERSONALITY TRAITS ON QUALITY OF LIFE AND ROMANTIC RELATIONSHIP SATISFACTION OF MIGRAINE PATIENTS: THE MODERATOR ROLE OF EMOTIONAL EXPRESSION

3.1 Literature Review of Study 2

Frequency, duration, and severity were illness-related variables. Most of the migraine studies were based on these variables about migraine. The associations among these three variable and the other variables (i.e., quality of life, quality of relationships) have been studied so far. In current study, these three variables will be used to get detailed information about the migraine sample. Frequency, duration, and severity will be a connection to understand the relation between migraine and quality of life in the following section.

3.1.1 Quality of Life and Migraine

Since migraine is a life-disrupting type of headache, many studies have been conducted to examine the quality of life of the patients. In general, these studies have focused on physical, emotional and social functioning of patients (Schrag, 2006) and they suggested that migraine reduces the health-related quality of life of patients (Raggi et al., 2011). For instance, in a qualitative study, in which migraine patients were asked to explain the difficulties in their lives, they reported three major problematic aspects in their social lives; work and studies, life within the family and/or with a partner, and social relationships outside the family and working environment (Ruiz de Velasco, González, Etxeberria, & Garcia-Monco, 2003). Although disability and quality of life are different constructs, disability in daily life, family life, and work life is strongly associated with lower quality of life. Therefore,

effects of disability on quality of life have been studied widely for migraine patients (Hambrick, Turk, Heimberg, Schneier, & Liebowitz, 2003). In a review article about quality of life that considered all types of headache patients, it was found that migraineurs had more disability in social functioning so they reported more absenteeism and they were less productive at work compared to other headache patients (Abu Bakar et al., 2015) Migraine is recorded as the 19th leading cause of disability for both women and men for all ages (Dawn C Buse, Rupnow, & Lipton, 2009), with women having more migraine related disability than men (Dawn C. Buse et al., 2012). In addition to this, chronic migraine patients suffer from disability two or three times more than episodic migraine patients (May & Schulte, 2016), and they are trying to get medical care more frequently than patients with episodic migraine (Bigal, Serrano, Reed, & Lipton, 2008).

Regarding personal point of view, it was clear that disabilities which migraine created affect the patients negatively. When considering the interpersonal point of view, migraine not only affect the patients themselves, it also affects the relationships which the patients were in (i.e., romantic relationship, family relationships). Therefore, in the next section the association between migraine and relationship satisfaction will be reviewed.

3.1.2 Relationship Satisfaction and Migraine

Migraine does not only negatively affect the quality of life of the patients, but also ruins their family life because of the disabilities that it leads to. For example, in a qualitative study, a migraine patient expressed the effects of disability on her life as follows; “I was in pain every Sunday, and I realize that it must have been a nightmare for my husband” (p. 896, Ruiz de Velasco et al., 2003). In the same study, another patient stated that her family members hate her owing to the reason that she cannot participate in any outside social activity with them.

There are various population-based studies supporting the above qualitative data, one of which was conducted in US and UK. In this study, it was found that half of the

people with migraine argued with their partners specifically because of migraine. Thirty six percent of migraine patients thought that if they did not have migraine, they would be a better partner. In addition, researchers stated that patients' communication with their partners was deteriorated because of migraine (Lipton et al., 2003). Furthermore, according to the findings of Smith's study (1998), one out of every four migraine patients had less often sexual relationship with their partner than before and their quality of sexual relationships diminished. Therefore, according to a study, patients with chronic headache had more cohesion problems in their relationship with their partners compared to people without headache (Basolo-Kunzer, Diamond, Maliszewski, Weyermann, & Reed, 1991). Moreover, other than cohesion of the relationship, relationship adjustment was also negatively affected by migraine (Carter & Carter, 1994) which results in unhappiness in the relationship (Renne, 1971). Consequently, 5% of migraine patients got divorced owing to these reasons (Smith, 1998).

Researchers, who studied the women-men difference in terms of relationship satisfaction in chronic illnesses, stated that women became less satisfied with their relationship when their husband were chronically ill. However, their relationship satisfaction was higher when they were chronically ill. Researchers explained this finding as following; while they were chronically ill, women became happy due to the attention they got from their partner; however, when the partner was chronically ill, they complained about their partner's disinterest and they became unhappy (Hafstrom & Shram, 1984).

To conclude, family functions are deteriorating and the relationship of the partners is adversely affected by migraine. Thus, studies underlined the importance of including the family to the treatment (Smith,1998). Therefore, relationship satisfaction of migraine patients will be an important focus of this study.

3.1.3 Emotion and Migraine

As stated previously, people with migraine have lots of impairments in their daily lives because of the frequency of the attacks. To illustrate, their daily routines, social life, and work life are affected by migraine attacks (Lipton et al., 2007). Migraine frequency was also negatively associated with global health utility, particularly in emotion, cognition and pain components (Brown et al., 2008). Pearce (1977) particularly stressed the importance of emotional disturbance which causes the most frequent and the most severe migraine attacks.

Since migraine is a widespread condition, there is an enormous number of research about its symptoms, effects on people's lives and the precipitating factors. Although there are many medical hypotheses about the causes of migraine, they remain insufficient for total understanding. Therefore, many researchers have discussed migraine from different perspectives. For example, Bussone, Grazzi, & Panerai (2012; Craig, 2003) who studied the relationship between pain, emotion, and headache, have suggested that pain may be an emotional response stemmed from the changes in the homeostasis of the interoceptive system that bring together the nociceptive information with the emotional brain work. They also stated that migraine is a sign of homeostatic imbalance within the body or brain. In other words, they emphasized the relation between emotions and migraine in their research.

3.1.4 Emotional Expression and Migraine

Breuer and Freud (1893) did also draw attention to the emotions for some psychosomatic symptoms including chronic headache. They focused their studies on the patients with hysterical symptoms. They recognized that the underlying reason of hysteria is a big trauma or many little traumas in patients' histories. The question why an event lived in the past affects the person that much was answered by Breuer and Freud. They stated that an energetic reaction (a class of voluntary or involuntary reactions like tears, acts of revenge etc.) for an event that aggravates an emotion is needed in order to lessen the effects of a negative emotion. Reaction was the key

element because presence of a reaction determined the future symptoms. In other words, suppression of the bad memory and reaction leads to hysterical symptoms including migraine in the future. Hence, to reduce the symptoms of hysteric patients, Breuer and Freud used language as a substitute for an action. In other words, "talking" replaced the original reaction and it is called "abreaction".

In the light of Breuer's and Freud's studies, expression of suppressed negative emotions gained importance for the treatment of psychosomatic disorders. Today, the effects of emotional inhibition on the psychosomatic illnesses are still important for the researchers and headache is considered as one of the most common representations of somatization (Abbass, Lovas, & Purdy, 2008). To illustrate, Passchier, Goudswaard, Orlebeke, and Verhage (1988) found in their study that emotional inhibition might contribute to a migraine attack after a stressful situation. Moreover, studies showed that migraineurs have a higher tendency to repress their emotions and direct their aggression to themselves rather than to others. In addition, they found that the higher the self-aggression, the higher the frequency of headaches in the migraine patients (Passchier et al., 1988). In other words, patients who cannot express their negative emotions and direct to themselves are likely to experience migraine attacks more frequently.

Although research about emotional expression mostly focused on individuals, Guerrero (1994) studied emotional expression from an interpersonal scope at the beginning of 1990's. Guerrero focused on the ways of expressing three negative emotions; anger, sadness, and guilt. In addition to describing emotional expression types, Guerrero and her colleagues gave their attention to investigating the effect of expressing emotions on relationships (Guerrero, La Valley, & Farinelli, 2008) Studies showed that relational satisfaction was higher when partners use constructive types of emotional expression rather than destructive ones (Guerrero, Farinelli, & McEwan, 2009). Moreover, in another study, researchers found that the emotional support that partners provided to each other made them perceive one another more emotionally responsive, and this predicted better health for the partners. The results

of this study also revealed that meeting emotional needs of each other in a relationship may provide better adjustment to cope with illnesses (Fekete, Stephens, Mickelson, & Druley, 2007).

The following part describes the three types of emotional expression (i.e., anger, guilt and sadness) in greater detail.

3.1.4.1 Types of Anger Expression

Guerrero (1994) made a very extensive literature review on emotions, and according to this review, anger was brought into focus in terms of expression. Anger expression was divided into four categories, namely distributive aggression, integrative assertion, passive aggression, and nonassertive- denial.

Distributive aggression was one of the most direct and threatful styles of expression of anger. It was characterized as behaviors like demanding too much, threating and discouraging the other person, and breaking objects (DeGiovanni & Epstein, 1978; Rimm, Hill, Brown, & Stuart, 1974).

The other type of anger expression was labeled as *integrative assertion* by Guerrero (1992 as cited in Guerrero, 1994) and it was conceptualized as integration, assertion, and empathy (Guerrero, 1994). People who use integrative assertion show their partners more empathy, make more self-disclosure, and they use problem-solving approach more (Guerrero et al., 2008). They desire to express their thoughts and feelings to their partners and they have more genuine communication (Piaget, 1980 as cited in Guerrero, 1994). In addition to their assertiveness, they are able to understand and respect their partners' feelings, needs, and thoughts (Bingham, 1991; Delamater & McNamara, 1986).

The third anger expression type defined by Guerrero (1994) was *passive aggression*. Passive aggression is threatening as distributive aggression type; on the other hand, it is indirect. In other words, people who use passive aggression generally wants to

intimidate their partners but they do it in silence. To illustrate, when there is a conflict, they remain in silence with cold and dirty looks or they make some insinuation but the message they want to give is not clear all the time Guerrero (1994).

The fourth and the last anger expression type was *nonassertive-denial*. Denial is nonassertive and indirect way of expressing aggression. People with denial type choose to deny their own feelings. There would be many reasons behind denial but one of the obvious ones is that these individuals dislike to confront with emotions like anger and they try to avoid both their own and the other's emotions. Summary of anger expression modes can be seen in Table 3.1(Guerrero, 1994). Before moving the next section, it is important to state that everyone use one or more type of anger expression especially in the conflictual situations, however, generally one or two of them becomes prominent. This is also applicable for other two emotions (i.e., sadness and guilt).

Table 3.1 *Modes of Anger Expression*

	Threatening	**Non-Threatening**
	Distributive Aggression	***Integrative Aggression***
	-Yells and screams at partner	-Listens to partner's side of the story
	-Criticizes partner	-Discusses problems with partner
Direct	-Tries to prove s/he is "right"	-Tries to be fair
	-Slams doors or throws object	-Clearly shares feelings with partner
	-Tries to get "even" with partner	-Tries to "patch things up"
	-Threatens partner	
	Passive-Aggression	***Nonassertive-Denial***
	-Gives partner silent treatment	-Hides feeling from the partner
Indirect	-Ignores partner	-Denies feeling angry
	-Gives partner cold/dirty look	
	-Leaves the scene	

Note. (Guerrero, 1994, p.127)

3.1.4.2 Types of Guilt Expression

Guerrero and her colleagues (2008) developed a questionnaire for determining types of guilt expression based on (Aune, Metts, & Hubbard, 1998) and the other previous research. The questionnaire was developed to assess how people react to the guilt evoking situations and it was found that there were four modes of guilt expression, namely apology/concession, explanations/justifications, appeasement, and denial/withdrawal. First, *apology/concession* includes taking responsibility of one's own behavior and apologizing when s/he feels guilty. Second type of guilt expression was *explanations/justifications*. People who use this type of expression give explanations to their partners about their behaviors and they tell the reason of their behaviors. Third type of guilt expression is *appeasement*. Appeasement is defined as being extra nice to the partner and giving promises about their future self of being a better partner. The fourth and the last guilt expression type is *denial/withdrawal*. It includes the behavior patterns which are avoiding the situation and not talking about it. People who use this type of guilt expression barely accept their behaviors that caused a serious situation and they have difficulties to understand that their behavior was wrong. Although Guerrero and colleagues (2008) determined four types of guilt expression in their study, (Özen, 2013) revealed three factor structures in Turkish culture, namely apology/explanations, appeasement, and denial. In other words, apology and explanations factors were combined in Turkish culture.

3.1.4.3 Types of Sadness Expression

Guerrero and Reiters (1998 as cited in Guerrero, La Valley, & Farinelli, 2008) developed Behavioral Responses to Sadness Scale to measure sadness expression types. Participants were asked how they express their feelings to their partners when they feel sad and according to results, four factors were obtained, namely positivity/distractions, social support seeking, immobilization, and solitude.

Positivity/distractions type of sadness expression is defined as distracting oneself with joyful activities and not focusing on sadness. People who use this type of expression direct their attention to activities they like. The second type of sadness expression is named as *social support seeking*. People who use this type of sadness expression share their feelings with their partners and they try to get attention from them. The third type of sadness expression is called *immobilization*. People who are immobilized when expressing their sadness do nothing and they just stay in bed. The fourth and the last type of sadness expression is *solitude* which is the desire to be alone when feeling sad. However, Guerrero, La Valley, and Farinelli (2008) combined immobilization and solitude factors in their study because their correlation was high. Therefore, the latest version of the Sadness Expression Scale consists of three subscales, namely positivity/distractions, social support seeking, and solitude/immobilization. Turkish version of the questionnaire did also reveal three factors, which are solitude/negative behavior, social support/dependent behavior, and positive activity (Özen, 2013).

To conclude, the importance of emotional expression in migraine and types of emotional expression have been mentioned so far. Expressing emotions has been proved to be more advantageous for treatment of migraine compared to inhibiting them. Although anger particularly has been related to chronic illnesses in the literature (Harmon-Jones & Harmon-Jones, 2016, p.775), sadness and guilt will also be studied in the present study. Negative effects of emotional non-expression have been highlighted, now it is essential to review the other reasons of migraine attacks, like personality. Therefore, the section that follows moves on to consider the association of personality trait and migraine.

3.1.5 Personality and Migraine

Personality characteristics are thought to be one of the most important psychological factors that impact on migraine patients' responses to the attacks and the degree of negative influence of these attacks on the patients' QOL.

First, it is meaningful to define personality; however, it is important to remember that there is no personality definition that all the personality theorists agreed on. Fiest and Fiest (2009, p.4) defined personality as follows "**…** is a pattern of relatively permanent traits and unique characteristics that give both consistency and individuality to a person's behavior". Many theorists did not even define personality but they explained their approach to it. Some of them defined it on their own perspective. A few decades ago, approach to personality concept had changed and started to focus on individual differences while defining personality. In the following periods, "trait" concept arose and five-factor model began to be used as a commonly held framework in order to comprehend and organize personality (Goldberg, 1993; Goldberg, John, Kaiser, Lanning, & Peabody, 1990; McAdams, 1992). Five-factor model suggested five personality traits named surgency (or extraversion), agreeableness, conscientiousness (or dependability), emotional stability (vs. neuroticism), and culture. Culture was also named as openness by McCrae and Costa (1987; Goldberg et al., 1990).

Extraversion (surgency) includes the characteristics of sociability, dominance and activity (McCrae & Costa, 1987), and positive affectivity (Lucas & Baird, 2004). Extravert people are fun-loving, lovesome and tender, friendly and talkative individuals (McCrae & Costa, 1987). They may also be called "joiner", because they are always willing to join every activity in their social lives (Fiest & Fiest, 2009). Agreeableness is another personality characteristic that Five-Factor model proposed and it is characterized by cooperation, empathy, curtesy, generosity, and flexibility (Goldberg et al., 1990). Fiest and Fiest (2009) stated that agreeableness scale differentiates softhearted people and cruel people from each other. Conscientiousness is a trait that is associated with goal-directed behavior. People with conscientiousness trait place importance on being on time, being regular and tidy for the task they encounter (McCrae & Costa, 1987). They successfully deal with frustrations that tasks and missions bring (Gençöz & Öncül, 2012). Openness to experience is another personality trait defined by adjectives like curious, imaginative, creative, original, and preferring diversity. Individuals who have openness to experience trait like to try

and experience new things, they do not like to experience familiar things all the time. They also question traditional values. Openness scale differentiates individuals who prefer variety in many aspects of their lives from people who prefer familiarity in their relationships and need closure (Fiest & Fiest, 2009). Neuroticism was one of the main traits that Eysenk proposed in his first theory. Then, McCrea and Costa (1987) also accepted this trait as one of the strongest and most prevalent personality characteristics. Neuroticism is characterized with emotional instability (McCrae & Costa, 1987). Behaviors of individuals with neuroticism give more importance to their "self", they pity themselves, they are emotional, and open to stress-related disorders (Fiest & Fiest, 2009). Many researchers found that neuroticism has an association with psychological disorders like depression and anxiety. Moreover, social interactions are negatively affected due to the characteristics of neuroticism (Gençöz & Öncül, 2012). Negative valance is another personality trait that emerged as a separate factor in the Turkish Basic Personality Traits Inventory. Gençöz and Öncül (2012) explained this sixth factor as an inhibiting one that affects psychological well-being. Although negative valance factor was similar to neuroticism, it was stated that while neuroticism was about distress and anxiety, negative valance was about self-worth. In addition, researchers emphasized that people with high negative valance generally try to ignore problematic situations and silently accept them.

Research on personality characteristics and their association with diseases focused on various personality theories and used many personality assessment tools so far. Results of these research suggested some "disease-prone" personality characteristics (Friedman & Booth-Kewley, 1987). Neuroticism was underlined as one of the most prevalent personality characteristics for migraine patients (Cao, Zhang, Wang, Wang, & Wang, 2002 as cited in Luconi et al., 2007; Merikangas, Stevens, & Angst, 1993). When examining Touraine and Draper (1934)'s research, it can be seen that they reached an association among migraine patients and emotional frustration, insecurity, hesitance, just like neurotic individuals' characteristics.

Similarly, in (Luconi et al., 2007) study, it was stated that the higher the hypochondria, depression, hysteria, and schizophrenia sub-scales of MMPI 2, the worse the prognosis of migraine. Since hypochondria, depression, and hysteria sub-scales are called the neurotic triad, this finding is consistent with the findings of the studies that were mentioned above (Luconi et al., 2007). In another study, researchers used a different instrument, Temperament and Character Inventory, for the assessment of personality. Accordingly, just as the neurotic people, migraine patients with chronic pain were found to show high avoidance of the stressful situations (Sánchez-Román et al., 2007). To sum up, neuroticism was the only personality characteristic closely related with migraine. Hence, the association between migraine and personality characteristics of the patients will be one of the focus in this study.

This section has attempted to provide a summary of the literature relating to migraine and related issues including illness-related characteristics, quality of life, marital satisfaction, emotion, emotional expression, and personality. In the next section, the aims and hypotheses of the current study will be stated.

3.2 The Aims and Hypotheses

3.2.1 The Aims of the Study 2

In the light of the literature mentioned above, the aim of the Study 2 is to investigate the predictive role of personality traits on quality of life and marital satisfaction of migraine patients; and the moderator role of emotional expression in these relations. The proposed model of the current study can be seen in Figure 3.1.

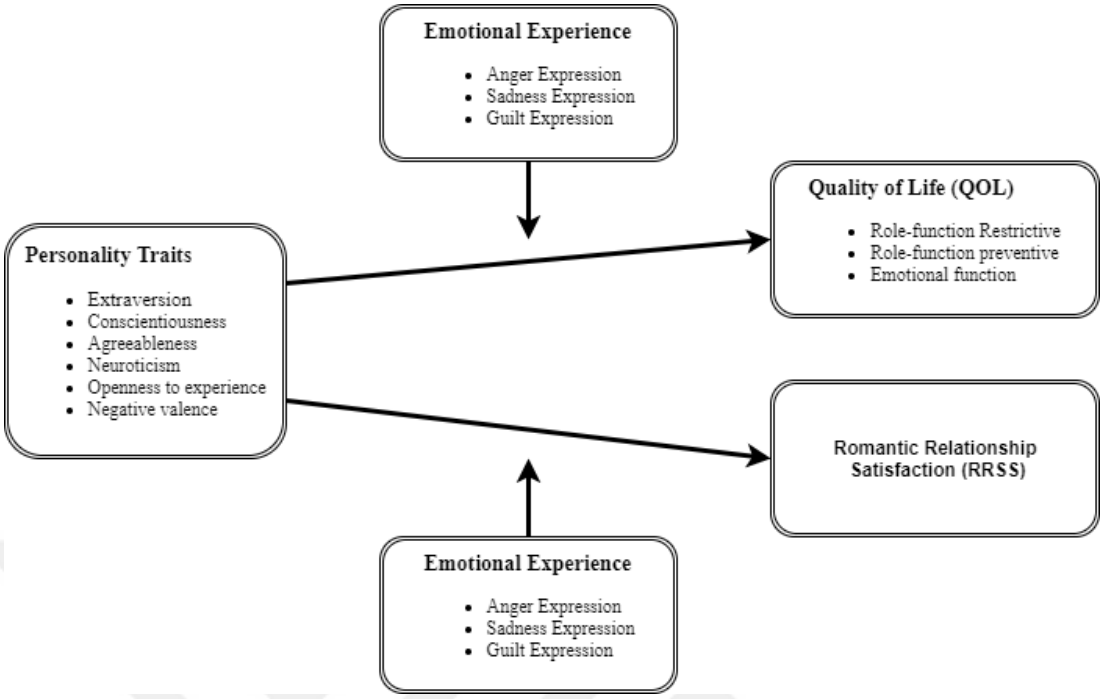

Figure 3.1 Proposed Model of the Study

3.2.2 Research Hypotheses

Hypotheses of Study 2 are as follows:

(1) Emotional expression (i.e., aggression, sadness, and guilt) would moderate the relation between personality characteristics (basic personality traits) and quality of life (QOL).

(1a) Migraine patients who have higher neurotic personality characteristics would have better QOL, if they use integrative aggression type of anger expression.

(1b) Migraine patients who have higher neurotic personality characteristics would have better QOL, if they use positive activity type of sadness expression.

(1c) Migraine patients who have higher neurotic personality characteristics would have better QOL, if they use apology type of guilt expression.

(2) Emotional expression (i.e., aggression, sadness, and guilt) would moderate the relation between personality characteristics (basic personality traits) and romantic relationship satisfaction.

(2a) Migraine patients who have higher neurotic personality characteristics would have higher romantic relationship satisfaction, if they use integrative aggression type of anger expression.

(2b) Migraine patients who have higher neurotic personality characteristics would have higher romantic relationship satisfaction, if they use positive activity type of sadness expression.

(2c) Migraine patients who have higher neurotic personality characteristics would have higher romantic relationship satisfaction, if they use apology type of guilt expression.

3.3 Method

3.3.1 Participants

The participants were 150 migraine patients who met the inclusion criterion of being married or having a romantic relationship at least for the last 6 months. Participants were selected according to the criteria of official diagnosis. Declarations of participants are taken as basis. One hundred and twenty-one participants were women (80.7%), 25 participants were men (16.7%), and 4 participants did not indicate their gender (2.7%).

Forty-three participants (28.7%) forgot to write down their age on the questionnaire while filling out the hard copies of the questionnaires. The age range of 107 participants (71.3%) was between 18 and 64 with a mean of 32.89 (*SD* = 7.46). The majority of the participants reported their income as middle level (*n* = 131, 87.3%). Nine participants (6%) perceived themselves in low income group and 8 of them (5.3%) perceived themselves in high income group. More than half of the sample consisted of undergraduate degree participants (*n* = 86, 57.3%), 36 of the remaining participants had graduate degree (24%) and 27 of them had high school degree (18%) at most. The distribution of the participants according to the residence where they had grown up was as follows: 66 of them grew up in metropolis (44%), 51 of them

grew up in a city (34%), and 31 of them grew up in a village, town or county (20.7%). Finally, the relationship status of the participants was distributed as follows: 85 of the participants (56.7%) had been married at least for the last 6 months and 63 of them (42%) had had a romantic relationship at least for the last 6 months (see Table 3.2 for the demographic characteristics of the sample).

Table 3.2 *Demographic Characteristics of the Sample of Study 2*

	M	*SD*	*n*	*%*	*Min-Max*
Gender					
Female			121	80.7	
Male			25	16.7	
Age	32.89	7.46			18-64
Income					
Low			9	6	
Middle			131	87.3	
High			8	5.3	
Education					
High School and Lower			27	18	
University			86	57.3	
Graduate			36	24	
Hometown Residence					
Village/Town/Country			31	20.7	
City			51	34	
Metropolis			66	44	
Relationship Status					
Married			85	56.7	
Romantic Relationship			63	42	

Time since migraine diagnosis varied between 2 months and 420 months (M = 98.87, SD = 93.93). In addition, the frequency of the migraine attacks of the sample for the last three months differed between 0-90 days with a mean of 11.17 (SD = 10.18), and the duration of their migraine attacks was between 0-720 hours with a mean of 30.02

(*SD* = 68.53). The participants evaluated the severity and controllability of their migraine attacks on a 10-point scale; the mean perceived severity of the attacks was 6.91 (*SD* = 1.95), and the mean perceived controllability of the attacks was 4.55 (*SD* = 2.55). Moreover, 76% of the participants (*n* = 114) stated that they had no other physical illness, while 22.7% of them (*n* = 34) had at least another physical illness except for migraine. Finally, while 8% of the sample (*n* = 12) reported at least one psychological disorder, 90.7% of them (*n* = 136) reported no psychological disorder (see Table 3.3 for the illness-related characteristics of the sample).

Table 3.3 *Illness-Related Characteristics of the Sample of Study 2*

	M	*SD*	*n*	*%*	*Min-Max*
Time Since Diagnosis (months)	98.87	93.93			2-420
Frequency (days)	11.17	10.18			0-90
Severity	6.91	1.95			1-10
Controllability	4.55	2.34			1-10
Duration (hours)	30.02	68.53			0-720
Physical Illness					
Yes			34	22.7	
No			114	76	
Psychological Disorder					
Yes			12	8	
No			136	90.7	

3.3.2 Measures

3.3.2.1 Demographic Information Form (DIF)

Demographic Information Form (DIF) included questions on gender, age, income, relationship status, hometown residence and absence-presence of any physical and psychological disorder.

In order to determine the illness-related characteristics of the participants, frequency, severity, duration and controllability of migraine attacks were asked to the participants by following questions; “Frequency: On how many days in the last 3 months did you have headache? (If the headache attack lasted more than 1 day, count each day.)”, “Severity: On a scale of 0 - 10, on average how painful were these headaches? (Where 0 = no pain at all, and 10 = pain as bad as it can be.)”, “Duration: Once the headache started, for how long have you had it?”, “Controllability: How controllable do you think your migraine attacks are?” (see Appendix A).

3.3.2.2 Migraine Specific Questionnaire (MSQ version 2.1)

Migraine Specific Questionnaire Version 1.0 was developed by Jhingran, Osterhaus, Miller, Lee, and Kirchdoerfer (1998) (Glaxo Welcome Inc.) and it aimed at measuring the migraine patients’ long-term quality of life over a specified time (4 weeks). Its psychometric properties were acceptable. Martin et al. (2000) revised the Migraine Specific Questionnaire and developed the version 2.1. In this revised questionnaire, there were three dimensions namely Role Restrictive (RR), Role Preventive (RP), and Emotional Function (EF). Role Restrictive dimension determines which performances of normal activities are limited by migraine, and its Cronbach alpha coefficient was .96. Role Preventive dimension assesses degree to which performance of normal activities is interrupted by migraine, and its Cronbach alpha coefficient was .93. The last dimension was Emotional Function and it measures the emotional influences of migraine such as feeling of frustration and helplessness, and its Cronbach alpha coefficient was .86. Subscale scores are calculated on a total of 100 points and higher scores indicate better health status. In the present study, the internal consistency reliabilities of the subscales as calculated by Cronbach’s alpha were .95 for role-function restrictive subscale, .92 for role-function preventive subscale, and .84 for emotional function subscale (see Appendix C).

3.3.2.3 Basic Personality Traits Inventory (BPTI)

Basic Personality Traits Inventory (BPTI) was developed particularly for Turkish culture by Gençöz and Öncül (2012) to measure six basic traits of personality namely extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valance. The inventory is scored on a five-point scale and answers range from does not apply to me at all (1) to definitely applies to me (5). The psychometric properties of BPTI were found to be satisfactory (Gençöz & Öncül, 2012). The internal consistency coefficients were found to be .89 for extraversion, .84 for conscientiousness, .85 for agreeableness, .83 for neuroticism, .80 for openness to experience, and .71 for negative valence. In addition, test-retest reliability scores of personality traits did range between .71 and .84 (Gençöz & Öncül, 2012). In the present study, internal consistency reliability of extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence subscales calculated by Cronbach's alpha were as follows respectively; .82, .86, .85, .79, .58, and .61 (see Appendix I).

3.3.2.4 Anger Expression Scale

Anger Expression Scale was developed by (Özen & Sümer, 2013)by combining Guerrero's (1994) 20-item measure, the Communicating Anger Scale, and 39 items obtained from Özen and Sümer's study (2013). Özen and Sümer conducted a qualitative pilot study in order to understand emotional expressions of couples in a conflictual situation, specifically in the Turkish culture. They also did a quantitative pilot study in order to adapt Guerrero's Communicating Anger Scale to Turkish culture. Then they combined the results of qualitative and quantitative pilot studies, and developed 59-item Anger Expression Scale items of which are rated on a 7-point Likert type scale ranging from strongly disagree to strongly agree. The scale assesses how couples express their anger in conflictual situations with using four factors namely, distributive aggression, passive aggression, avoidance/denial, and integrative aggression. Their Cronbach's alpha coefficients were .92 for wives and .94 for

husbands for the distributive aggression; .88 for wives and .88 for husbands for the passive aggression; .83 for wives and .76 for husbands for the avoidance/denial; and .82 for wives and .89 for husbands for the integrative assertion sub-scale.

Distributive aggression has 19 items. Distributive aggression type of anger expression contains destructive behaviors such as humiliating, insulting and blaming the others under discussion. Individuals using this style try to prove their ideas and they do not want to listen other's opinions.

Passive aggression consists of 11 items. Passive aggression is a destructive but passive expression style. People who have this kind of anger expression type do not prefer to raise their voice; however, they put a distance between the ones they are angry with. They do not confront and talk directly to their partners but they show their anger in an indirect way like behaving coldly to them.

Avoidance/denial subscale has 13 items. Individuals who use this type of anger expression try to avoid the situation or the partner. They behave like everything is all right to their partners and they try to solve the problem introspectively.

Integrative assertion subscale consists of 9 items. This type of anger expression is active and constructive. Individuals having this type of expression can stay calm and talk to their partners directly and express their anger in a constructive manner.

In the present study, internal consistency reliability of distributive aggression subscale was .94, passive aggression subscale was .90, avoidance/denial subscale was .82, and integrative assertion subscale was .86. Internal consistency reliabilities were calculated by Cronbach's alpha (see Appendix F).

3.3.2.5 Sadness Expression Scale

Sadness Expression Scale was developed by Özen and Sümer (2013) by combining 26 items from Guerrero and Reiter's (1998) Revised Responses to Sadness scale and

35 items from Özen and Sümer's study. Özen and Sümer conducted a qualitative pilot study in order to understand emotional expressions of couples in a conflictual situation, specifically in the Turkish culture. They did also a quantitative pilot study in order to adapt Guerrero's Revised Responses to Sadness Scale to Turkish culture. Then they combined the results of qualitative and quantitative pilot studies, and developed 61- item Sadness Expression Scale measured on a 7-point Likert type scale ranging from strongly disagree to strongly agree. The scale measures how couples communicate their sadness in the conflictual situations. There are three subscales namely solitude/negative behavior, social support/dependent behavior, and positive activity. Internal consistencies of the subscales were.92 for wives and .92 for husbands for the solitude/negative behavior subscale, .90 for wives and .92 for the social support/dependent behavior, and .82 for wives and .86 for husbands for the positive activity subscale.

Solitude/negative behavior subscale has 27 items. Individuals who use this sadness expression style cannot handle with the problem, accuse their partners actively, on the other hand they stay away from their partners for a couple of days. They also show depressive behavior patterns such as being sick and tired all day.

Social support/dependent behavior subscale consists of 16 items. Social support/dependent behavior has active and constructive behaviors. Individuals using this strategy tries to get interest and support from partner and tries to be close to them but sometimes passively wait for the partner's attention and care.

Positive activity subscale has 10 items. People using this sadness expression type directed their attention to another thing except for conflict or problem. They do irrelevant activities like watching TV, concentrating on their work, playing a game in order not to think the problem (see Appendix G).

In the present study, internal consistency reliabilities were calculated by Cronbach's alpha and results showed that internal consistency reliability of solitude/negative

behavior was .88, social support/dependent behavior subscale was .88, and positive activity subscale was .88.

3.3.2.6 Guilt Expression Scale

Guilt Expression Scale was developed by Özen and Sümer (2013) by combining (Guerrero et al., 2009) 20 items from the Guilt Expression Scale and 19 items that were obtained from the content analyses of Özen and Sümer's study. Özen and Sümer conducted a qualitative pilot study in order to understand emotional expressions of couples in a conflictual situation, specifically in the Turkish culture. They also did a quantitative pilot study in order to adapt Guerrero's Communicating Anger Scale to Turkish culture. Then they combined the results of qualitative and quantitative pilot studies, and developed 39-item Guilt Expression Scale measured on a 7-Likert type scale ranging from strongly disagree to strongly agree. There are three subscales, namely apology/ appeasement, denial, and explanation. The internal consistency alpha coefficients were .91 for wives and .89 for husbands for the apology/appeasement subscale, .84 for wives and .88 for husbands for the denial, and .85 for wives and .89 for husbands for the explanation subscale.

Apology/appeasement subscale consists of 17 items. This type of guilt expression includes behaviors like apologizing, accepting the fault, and telling the partner that they are regretful of their behavior. They also show more affection and be extra nice to the partner in order to compensate their regret.

Denial is another type of guilt expression and it has 12 items. They do not want to confront their fault, even if they are confronted by force, they devaluate the importance of their fault.

Explanations has 6 items. Explanation dimension consist of behaviors like explaining the reasons of their actions and criticizing themselves (see Appendix H).

In the present study, internal consistency reliabilities were calculated by Cronbach's alpha. Internal consistency reliability of apology/appeasement subscale was .91, denial subscale was .83, and explanations subscale was .87.

3.3.2.7 Romantic Relationship Satisfaction Scale (RRSS)

RRSS was developed by Sakallı-Uğurlu (2003) and it has a single factor which measures romantic relationship satisfaction. It consists of 9 items rated on 7-point-Likert-type scale.

Internal reliability coefficient of this scale is .90. The median value was 6.20 and the scores above the median showed high satisfaction, scores below the median showed low satisfaction. Internal reliability coefficient was .93 in the current study (see Appendix J).

3.3.3 Procedure

Procedures applied in Study 2 were same as the ones applied Study 1. Study 1 and Study 2 data were gathered at the same time.

3.4 Results

3.4.1 Preliminary Analyses-Differences among the Levels of Demographic Variables in terms of Study Measures

Independent sample t-tests, ANOVA and MANOVA were conducted to examine the group differences among the levels of demographic variables on the measures. Only significant results were reported.

3.4.1.1 Group Differences among the Levels of Demographic Variables in Terms of Illness-Related Characteristics and Romantic Relationship Satisfaction

3.4.1.1.1 Independent Samples *t*-test Analyses

Independent samples *t*-tests were conducted to examine the group differences among the levels of gender, relationship status, presence or absence of physical illness history and presence or absence of psychological disorder history on time since diagnosis, frequency of migraine, severity of migraine, duration of migraine, controllability of migraine, and romantic relationship satisfaction. According to the results, the difference between men and women was significant in terms of controllability of migraine ($t(144) = 1.99$, $p < .05$). In other words, women ($m = 4.74$, $sd = 2.39$) reported significantly higher levels of controllability as compared to men ($m = 3.72$, $sd = 1.99$) (see Table 3.4).

Table 3.4 *Descriptive Statistics and t-test Results for Gender*

		N	*m*	*sd*	*t*
Controllability					
	Women	91	4.74	2.39	1.99*
	Men	16	3.72	1.99	

Note. *$p < .05$

Moreover, there were significant differences between participants who had physical illness other than migraine and who had no other physical illness in terms of time since diagnosis ($t(145) = 3.31$, $p < .05$) and perceived severity of migraine ($t(146) = 2.22$, $p < .05$). Participants with other physical illness ($m = 144.8$, $sd = 109.02$) got their migraine diagnosis longer time ago than participants without other physical illness ($m = 85.72$, $sd = 85.41$). Furthermore, the perceived severity of the migraine of the participants with another physical illness ($m = 5.59$, $sd = 2.02$) was more than the severity of the migraine of the participants without another physical illness ($m = 6.77$, $sd = 1.84$) (see Table 3.5).

Table 3.5 *Descriptive Statistics and t-test Results for Presence of Physical Illness*

		N	*m*	*sd*	*t*
Time Since Diagnosis					3.31*
	Yes	34	144.8	109.02	
	No	113	85.72	85.41	
Severity					2.22*
	Yes	34	5.59	2.02	
	No	114	6.77	1.84	

Note. $*p < .05$

3.4.1.1.2 One-Way Analysis of Variance (ANOVA)

A series of one-way ANOVAs were conducted in order to investigate the group differences among the levels of education and hometown of participants on, time since diagnosis, frequency of migraine, severity of migraine, duration of migraine, controllability of migraine, and relationship satisfaction. Only significant results were reported below.

According to the results, levels of education significantly differed from each other on severity of the migraine ($F(2, 144) = 3.44$, $p < .05$), and levels of the education marginally significant from each other in terms of romantic relationship satisfaction ($F(2, 145) = 3.18$, $p < .05$). Post hoc analyses using Tukey HSD test revealed that the participants who had high school degree and lower ($m = 7.81$, $sd = 2.23$) had significantly more severe symptoms than the participants who had graduate level degree ($m = 6.58$, $sd = 1.83$). Moreover, undergraduate degree participants ($m = 57.04$, $sd = 11.52$) reported marginally significant more romantic relationship satisfaction than the participants who had high school degree and lower ($m = 50.92$, $sd = 14.04$). Additionally, according to the Tukey HSD test, participants who had graduate degree ($m = 57.78$, $sd = 11.001$) reported that they were more satisfied with their relationship as compared to participants who had high school degree and lower ($m = 50.92$, $sd = 14.04$) (see Table 3.6).

Table 3.6 *Descriptive Statistics, Analysis of Variance, and Tukey HSD Tests for Education Level*

	High School and Lower (n = 16)		Undergraduate (n = 61)		Graduate (n = 30)		One-Way ANOVA		
	m	*sd*	*m*	*sd*	*m*	*sd*	*df*	*F*	*p*
Severity	7.81_{a}	2.23	6.79_{ab}	1.90	6.58_{b}	1.83	2,144	3.44	.035
Romantic Relationship Satisfaction	50.92_{a}	14.04	57.04_{b}	11.52	57.78_{b}	11.001	2,145	3.18	.044

Note. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

3.4.1.2 Group Differences among the Levels of Demographic Variables in Terms of Emotional Expression, Quality of Life, and Personality Traits

3.4.1.2.1 Multivariate Analysis of Variance (MANOVA)

A series of multivariate analysis of variance (MANOVA) were conducted in order to investigate the group differences between the levels of gender, relationship status, presence or absence of physical illness and presence or absence of psychological disorder history, education level, and participants' hometown on the measures of expression of sadness, expression of guilt, expression of anger, migraine specific quality of life, personality characteristics of the participants. Bonferroni correction was applied for all the significance levels and only the significant results were reported here.

According to the findings, migraine specific quality of life significantly differed between the levels of gender [Multivariate F (3, 140) = 4.31, p< .02, Wilks' λ= .92, partial η^2 = .08]. In detail, role-function restriction of migraine significantly differed between women and men [F (1, 142) = 7.00, p < .01; partial η^2 = .05] and men (m = 62.97, sd = 4.56) had more role-function restriction scores (better health status) than women (m = 49.70, sd = 2.09). Moreover, women and men were significantly different from each other in terms of role-function prevention of migraine [F(1, 142) = 10.26, p < .01; partial η^2 = .07] and migraine prevented men's life (m = 76.60, sd = 4.85) less than women's life (m = 59.50, sd = 2.23) (higher role-function restriction scores indicated better health status). However, there was no significant difference between men and women in terms of emotional function of migraine [F(1, 142) = 1.44, p > .05] (see Table 3.7).

Table 3.7. *MANOVA Results for Gender*

	Female		Male		Significance Test
	m	*sd*	*m*	*sd*	
Quality of Life Multivariate $F(3, 140) = 4.31$, $p < .02$, Wilks' $\lambda = .92$, partial $\eta^2 = .08$					
RFR	49.70	2.09	62.97	4.56	$F(1, 142) = 7.00$*
RFP	59.50	2.23	76.60	4.85	$F(1, 142) = 10.26$*
EF	63.08	26.04	69.87	24.12	$F(1, 142) = 1.44$

Note 1. *$p < .001$

Note 2. Higher scores indicate better quality of life

Levels of relationship status of the participants were significantly different in terms of expression of aggression of the participants (according to the Bonferroni correction, significance value was taken .0125) [Multivariate $F(4, 143) = 3.47$, $p < .012$, Wilks' $\lambda = .91$, partial $\eta^2 = .09$]. When univariate results were taken into consideration, it was found that there was no significant univariate results. In other words, none of the distributive aggression type [$F(1, 146) = 1.64$, $p > .05$], passive aggression type [$F(1, 146) = 1.60$, $p > .05$], avoidance/denial type [$F(1, 146) = 0.55$, $p > .05$], or integrative assertion type of aggression [$F(1, 146) = 0.22$, $p > .05$] was significantly affected by relationship status of the participants (see Table 3.8).

Table 3.8 *MANOVA Results for Relationship Status*

	Married		Romantic Relationship		Significance Test
	m	*sd*	*m*	*sd*	
Anger Expression	Multivariate $F(4, 143) = 3.47$, $p < .012$, Wilks' $\lambda = .91$, partial $\eta^2 = .09$				
Distributive Aggression	54.97	22.23	59.90	23.32	$F(1, 146) = 1.64$, n.s
Passive Aggression	46.42	14.28	43.54	12.94	$F(1, 146) = 1.60$, n.s
Avoidance/Denial	36.54	11.52	38.03	12.92	$F(1, 146) = 0.55$, n.s
Integrative Assertion	45.39	9.21	44.67	9.51	$F(1, 146) = 0.22$, n.s

Note. *$p < .001$

Moreover, participants with and without psychological disorders significantly differed in terms of their personality characteristics (according to the Bonferroni correction, significance value was taken .008) [Multivariate $F(6, 140) = 3.25$, $p < .008$, Wilks' $\lambda = .88$, partial $\eta^2 = .12$]. Extraversion [$F(1, 145) = 9.23$, $p < .01$; partial $\eta^2 = .06$] and agreeableness [$F(1, 145) = 10.19$, $p < .01$; partial $\eta^2 = .07$] were the two personality characteristics on which the participants significantly differed. People who did not have a psychological disorder ($m = 29.62$, $sd = 0.48$) were more extravert than people who had psychological disorder ($m = 24.27$, $sd = 1.69$). Furthermore, people who did not have any psychological disorder ($m = 34.90$, $sd = 0.33$) were more agreeable than people who had psychological disorder ($m = 31.09$, $sd = 1.15$). On the other hand, participants with and without psychological disorder did not differ in terms of conscientiousness [$F(1, 145) = 0.44$, $p > .05$], neuroticism [$F(1, 145) = 1.37$, $p > .05$], openness to experience [$F(1, 145) = 0.65$, $p > .05$], and negative valance [$F(1, 145) = 2.31$, $p > .05$] (see Table 3.9).

Table 3.9 *MANOVA Results for Presence or Absence of Psychological Disorder*

	Presence		Absence		Significance Test
	m	*sd*	*m*	*sd*	
Personality	Multivariate $F(6, 140) = 3.25$, $p < .008$, Wilks' $\lambda = .88$, partial $\eta^2 = .12$				
Extraversion	24.27	1.69	29.62	0.48	$F(1, 145) = 9.23$*
Agreeableness	31.09	1.15	34.90	0.33	$F(1, 145) = 10.19$*
Conscientiousness	29.27	5.04	30.54	6.20	$F(1, 145) = 0.44$
Neuroticism	28.52	6.13	26.08	6.69	$F(1, 145) = 1.37$
Openness to Experience	20.73	3.55	21.60	3.46	$F(1, 145) = 0.65$
Negative Valance	10.09	3.21	8.78	3.71	$F(1, 145) = 2.31$

Note. *$p < .01$

Participants with different educational levels significantly differed in terms of expression of anger (according to the Bonferroni correction, significance value was taken .0125) [Multivariate $F(8, 286) = 3.70$, $p < .0125$, Wilks' $\lambda = .82$, partial $\eta^2 = .09$]. In terms of avoidance/denial type of anger expression, participants with

different education levels significantly differed from each other [$F(2, 146) = 10.98$, $p < .01$; partial $\eta^2 = .13$]. According to post-hoc test using Bonferroni method, participants who had at most high school degree ($m = 44.60$, $sd = 21.19$) used avoidance/denial type of anger expression more than the participants with undergraduate degree ($m = 37.49$, $sd = 1.23$) and graduate degree ($m = 31.08$, $sd = 1.89$). Moreover, undergraduate degree participants ($m = 37.49$, $sd = 1.23$) used avoidance/denial type of anger expression more than graduate degree participants ($m = 31.08$, $sd = 1.89$). On the other hand, there were no significant differences among the education levels in terms of distributive aggression [$F(2, 146) = 2.46$, $p > .05$], passive aggression [$F(2, 146) = 3.01$, $p > .05$], and integrative assertion [$F(2, 146) = 0.95$, $p > .05$] (see Table 3.10).

Table 3.10 *MANOVA Results for Education Level*

	High School and Lower		Undergraduate		Graduate		Significance Test
	m	*sd*	*m*	*sd*	*m*	*sd*	
Anger Expression Multivariate $F(8, 286) = 3.70$, $p < .0125$, Wilks' $\lambda = .82$, partial $\eta^2 = .09$							
Distributive Aggression	60.68	23.11	58.98	22.82	49.96	21.11	$F(2, 146) = 2.46$
Passive Aggression	49.61	12.04	45.45	13.66	41.22	14.20	$F(2, 146) = 3.01$
Avoid/Denial	44.60_a	21.19	37.49_b	1.23	31.08_c	1.89	$F(2, 146) = 10.98$*
Integrative Assertion	43.96	10.14	44.59	9.60	46.83	7.88	$F(2, 146) = .95$

Note 1. *$p < .001$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other according to Tukey's HSD test

3.4.1.3 Correlational Analyses among the Measures of the Study

Pearson correlation coefficients among the variables of this study were presented in Table 3.11 Correlation analyses revealed that one of the independent variables, frequency of migraine had positive correlation with duration of the migraine (r = .33, p < .01), severity of the migraine (r = .22, p < .01), and agreeableness personality characteristic (r = .19, p < .05); however, it was negatively correlated with role-function restrictive *(*r = -.27, p < .01) and emotional function *(*r = -.27, p < .01). Another independent variable of the study was duration of the migraine and it was positively correlated with severity of the migraine (r = .24, p < .01) and neuroticism personality characteristics (r = .19, p < .05). On the other hand, duration of the migraine was negatively correlated with role-function restrictive (r = -.20, p < .05), role-function preventive (r = -.19, p < .05) and emotional function (r = -.21, p < .05). In addition, while another illness related independent variable, severity, was positively correlated agreeableness personality characteristics (r = .21, p < .01), it was negatively correlated controllability of migraine (r = -.18, p < .05), role function restrictive (r = -.45, p < .01), role function preventive (r = -.37, p < .01), and emotional function variables (r = -.40, p < .01). Lastly, another illness related variable, controllability, had positive correlation with emotional function (r = .25, p < .01) and it had negative correlation with avoidant emotional expression style (r = -.16, p < .05).

Extraversion, as a personality characteristic, was positively correlated with agreeableness (r = .23, p < .01), conscientiousness (r = .19, p < .05), openness to experience (r = .48, p < .01), and positive activity (r = .24, p < .01), whereas it was negatively correlated with avoidance (r = -.24, p < .01) and solitude/negative behavior (r = -.18, p < .05). Agreeableness was another personality characteristics that was positively correlated conscientiousness (r = .39, p < .01), openness to experience (r = .32, p < .01), integrative assertion (r = .30, p < .01) , and explanations (r = .20, p < .05); and it was negatively correlated with neuroticism (r = -.25, p < .01), negative valance (r = -.33, p < .01), and distributive aggression (r =

-.18, $p < .05$). The correlation analyses conducted with conscientiousness personality characteristics showed that it had positive correlation with openness to experience ($r = .23$, $p < .01$) and it had negative correlations with neuroticism ($r = -.20$, $p < .05$) and negative valance ($r = -.26$, $p < .01$). The correlation of neuroticism with negative valance ($r = .44$, $p < .01$), distributive aggression ($r = .54$, $p < .01$), passive aggression ($r = .43$, $p < .01$), solitude/negative behavior ($r = .25$, $p < .01$), and denial ($r = .19$, $p < .05$) was positive; however, its correlation with integrative assertion ($r = -.33$, $p < .01$) and positive activity ($r = -.17$, $p < .05$) was negative. Openness to experience was positively correlated with integrative assertion ($r = .22$, $p < .01$), positive activity ($r = .25$, $p < .01$). In addition, negative valance was positively correlated with distributive aggression ($r = .41$, $p < .01$), solitude/negative behavior ($r = .18$, $p < .05$), and denial ($r = .23$, $p < .01$). It was also negatively correlated with integrative assertion ($r = -.22$, $p < .01$), and explanations ($r = -.16$, $p < .01$).

Emotional expression, is one of the moderator variables in the main study, and distributive aggression is one of its sub-factors. There was a positive correlation between distributive aggression and passive aggression ($r = .68$, $p < .01$), solitude/negative behavior ($r = .46$, $p < .01$), and denial ($r = .37$, $p < .01$). Moreover, there was a negative correlation between distributive aggression and integrative assertion ($r = -.42$, $p < .01$), and relationship satisfaction ($r = -.19$, $p < .05$). Passive aggression is another emotional expression style and its correlation with solitude/negative behavior ($r = .63$, $p < .01$) and denial ($r = .41$, $p < .01$) were positive, whereas integrative assertion ($r = -.26$, $p < .01$), and relationship satisfaction ($r = -.26$, $p < .01$) were negatively correlated with passive aggression. Furthermore, avoidance type of aggression expression was positively correlated with solitude/negative behavior ($r = .39$, $p < .01$), positive activity ($r = .35$, $p < .01$), and denial ($r = .53$, $p < .01$); and it was negatively correlated with explanation ($r = -.27$, $p < .01$), and relationship satisfaction ($r = -.21$, $p < .05$). In addition, integrative assertion had a positive correlation with dependent behavior ($r = .31$, $p < .01$), apology ($r = .32$, $p < .01$), explanations ($r = .52$, $p < .01$), and relationship

satisfaction (r = .30, p < .01); and it had negative correlation with solitude/negative behavior (r = -.26, p < .01), denial *(*r = -.38, p < .01).

Solitude/negative behavior was positively correlated with denial (r = .50, p < .01), and it was negatively correlated with relationship satisfaction (r = -.36, p < .01), role-function restrictive (r = -.20, p < .05), role-function preventive (r = -.28, p < .01), and emotional function (r = -.26, p < .01). Moreover, there were positive correlations between dependent behavior and apology (r = .40, p < .01), relationship satisfaction (r = .27, p < .01). In addition, there was a positive correlation between positive activity and denial (r = .25, p < .01).

Apology was positively correlated with explanations (r = .44, p < .01), relationship satisfaction (r = .18, p < .05), role-function restrictive (r = .21, p < .05), and role-function preventive (r = .19, p < .05). In addition, denial had a negative correlation with explanations (r = -.43, p < .01), and relationship satisfaction (r = -.31, p < .01). Moreover, explanations was positively correlated with relationship satisfaction (r = .27, p < .01).

Relationship satisfaction was one of the dependent variables and it was positively correlated with role-function preventive (r = .19, p < .05), and emotional function (r = .20, p < .05). Role-function restrictive was also positively correlated with role-function preventive (r = .85, p < .01) and emotional function (r = .71, p < .01). Finally, role-function preventive was positively correlated with emotional function (r = .72, p < .01).

Table 3.11 *Correlation Analyses Among the Measures of the Study*

	Fre	Dur	Sev	Con	Ext	Agg	Cou	Neu	Ope	Neg	Dis	Pas	Avo	Int	Sol	Dep	Pos	Apo	Den	Exp	Rrss	Rfr	Rfp	Ef
Fre																								
Dur	0,33**																							
Sev	0,22**	0,24**																						
Con	-0,02	-0,05	-0,18*																					
Ext	-0,08	-0,02	-0,04	0,13	**(.82)**																			
Agg	0,19*	0,07	0,21**	0,04	0,23**	**(.85)**																		
Cou	0,08	0,08	0,09	0,06	0,19*	0,39**	**(.86)**																	
Neu	0,02	0,19*	-0,05	-0,15	-0,06	-0,25**	-0,2*	**(.79)**																
Ope	0,03	-0,01	0,1	0,08	0,48**	0,32**	0,23**	-0,14	**(.58)**															
Neg	0,02	-0,01	-0,01	-0,14	-0,1	-0,33**	-0,26**	0,44**	-0,07	**(.61)**														
Dis	0,07	0,15	-0,004	-0,06	0,05	-0,18*	-0,15	0,54**	-0,044	0,41**	**(.94)**													
Pas	0,07	0,09	-0,02	-0,01	-0,06	0,05	0,001	0,43**	-0,09	0,15	0,68**	**(.90)**												
Avo	0,06	0,02	0,05	-0,1*	-0,24*	0,13	0,11	-0,12	0,002	0,07	-0,08	0,13	**(.82)**											
Int	-0,02	-0,11	0,01	0,09	-0,002	0,1**	0,16	-0,33*	0,22*	-0,22**	-0,42**	-0,26**	0,02	**(.86)**										
Sol	0,06	0,05	0,05	-0,14	-0,18*	0,06	0,004	0,25**	-0,06	0,18*	0,46**	0,63**	0,39**	-0,26**	**(.88)**									

Table 3.11 (continued)

	Fre	Dur	Sev	Con	Ext	Agg	Cou	Neu	Ope	Neg	Dis	Pas	Avo	Int	Sol	Soc	Pos	Apo	Den	Exp	Rrs	Rfr	Rfp	Ef
Dep	-0,05	-0,14	-0,03	0,03	0,06	-0,07	-0,07	0,10	0,09	0,11	0,14	-0,001	-0,1	0,31**	-0,13	**(.88)**								
Pos	0,06	0,10	-0,02	0,14	0,24**	0,16	0,02	-0,17*	.25**	-0,02	-0,07	0,02	0,35**	0,12	0,01	0,02	**(.88)**							
Apo	-0,01	0,01	-0,1	0,07	-0,01	-,002	-0,11	0,05	0,06	-0,01	0,07	-0,06	-0,11	0,32**	0,02	0,40**	0,04	**(.91)**						
Den	-0,08	0,06	0,03	-0,02	-0,11	-0,01	-0,01	0,19*	-0,07	0,23**	0,37**	0,41**	0,53**	-0,38**	0,50**	0,06	0,25**	-0,15	**(.83)**					
Exp	0,05	0,08	-0,04	0,06	-0,03	0,2*	0,07	-0,03	0,15	-0,16*	-0,04	0,04	-0,27**	0,52**	-0,08	0,14	0,02	0,44**	-0,43**	**(.87)**				
Rrss	0,11	-0,16	-0,01	0,04	0,13	0,12	0,12	-0,11	0,15	-0,12	-0,19*	-0,26**	-0,21*	0,30**	0,36**	0,27**	-0,02	0,18*	-0,31**	0,27**	**(.93)**			
Rfr	-0,27**	-0,2*	-0,45**	0,13	-0,02	-0,02	-0,04	-0,07	0,01	-0,03	-0,10	-0,13	-0,004	0,14	-0,20*	0,04	-0,01	0,21*	-0,03	0,06	0,13	**(.95)**		
Rfp	-0,16	-0,19*	-0,37**	0,09	-0,03	-0,01	-0,02	-0,06	0,02	-0,07	-0,12	-0,13	-0,1	0,11	-0,28**	0,06	0,01	0,19*	-0,1	0,13	0,19*	0,85**	**(.92)**	
Ef	-0,27**	-0,21*	-0,40**	0,25**	0,08	-0,11	-0,03	-0,03	0,08	-0,02	-0,09	-0,08	-0,14	0,02	-0,26**	-0,02	-0,04	0,04	-0,06	0,08	0,20*	0,71**	0,72**	**(.84)**

Note 1. *$p < .05$, **$p < .01$;

Note 2. Fre: Frequency, Dur: Duration, Sev: Severity, Con: Controllability, Ext: Extraversion, Agg: Agreeableness, Cou: Conscientiousness, Neu: Neuroticism Ope: Openness to experience, Neg: Negative valance, Dis: Distributive aggression, Pas: Passive aggression, Avo: Avoidance, Int: Integrative assertion, Sol: Solitude/Negative behavior, Soc: Social Support/Dependent Behavior, Pos: Positive activity, Apo: Apology, Den: Denial, Exp: Explanations, Rrss: Relationship Satisfaction, , Rfr: Role function restrictive, Rfp: Role function preventive, Ef: Emotional function

Note3. Scores showed within the parentheses on the diagonal represent the Cronbach's alpha coefficients of the study variables

3.4.2 Moderation Analyses

In order to assess moderator role of emotional expression of aggression, emotional expression of sadness, and emotional expression of guilt (i.e., distributive aggression, solitude/negative behavior, and apology) on the relations of personality characteristics (i.e., neuroticism, agreeableness, extraversion) with quality of life (i.e., role-function restrictive, role-function preventive, and emotional function) and relationship satisfaction, 240 moderation analyses were conducted and only the significant ones were reported. Moderation analyses were conducted using Process tool for SPSS, which was developed by Hayes and Matthes (2009).

3.4.2.1 Moderator Role of Passive Aggression on Agreeableness and Role-Function Restriction of Migraine Association

An analysis was conducted in order to figure out the moderator role of passive aggression on the association between agreeableness and role-function restriction. The whole model was significant (R^2=.055, $F(3, 144) = 2.766$, $p < .05$). The interaction was also significant ($B = -0.071$, $SE = 0.030$, $p < .05$) and critical value was 16.801 ($B = -1.481$, $SE = 0.749$, $p < .05$, 95% CI [-2.961,0]). If passive aggression score were above the critical value, agreeableness and role-function restriction association was significant and negative (see Figure 3.2). That is, the participants who had more agreeableness scores had less role-function restriction scores which means lower health status, if they showed higher level of passive aggression expression.

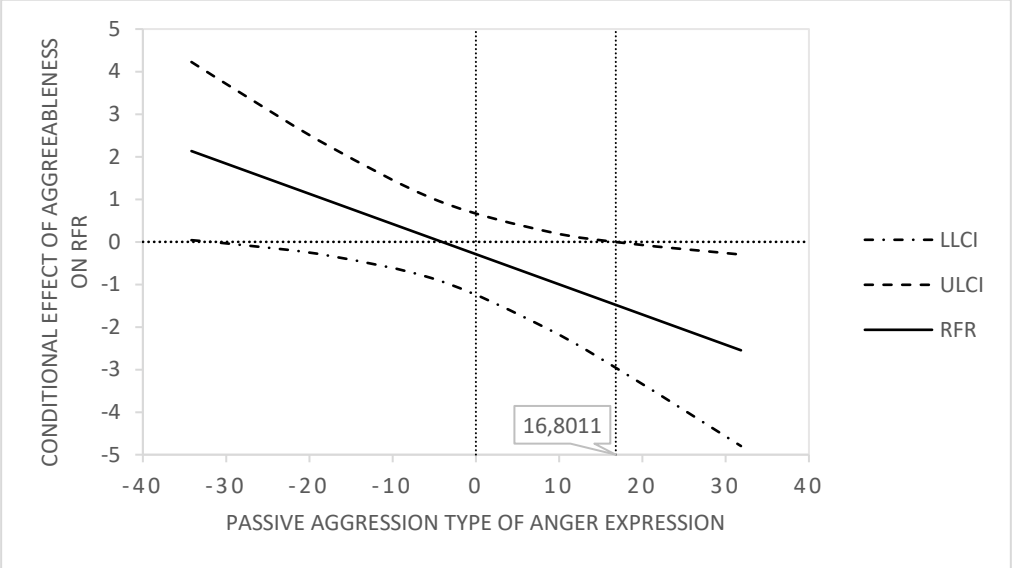

Figure 3.2 The Association between Agreeableness and Role-Function Restriction for Different Values of Passive Aggression

Note . RFR: Role function restriction, LLCI: Lower limit confidence interval, ULCI: Upper limit confidence interval.

3.4.2.2 Moderator Role of Passive Aggression on Agreeableness and Emotional Function of Migraine Association

The moderator role of passive aggression type of anger expression was inspected on the relation of agreeableness type of personality characteristics and emotional function (EF) of migraine and the whole model turned out to be significant (R^2=.062, $F(3, 146) = 3.207$, $p < .05$). Moreover, interaction was significant ($B = -0.087$, $SE = 0.033$, $p < .01$). The critical value was 1.435 ($B = -1.054$, $SE = 0.533$, $p = .05$, 95% CI [-2.108,0]). When passive aggression scores were above the critical value, the relation between agreeableness and EF was significant. The relation between agreeableness and EF was significant and negative while passive aggression was above the critical value (see Figure 3.3). That is, if the participants had higher passive aggression scores than critical value, they had lower emotional function scores (lower health status) when they had more agreeableness scores.

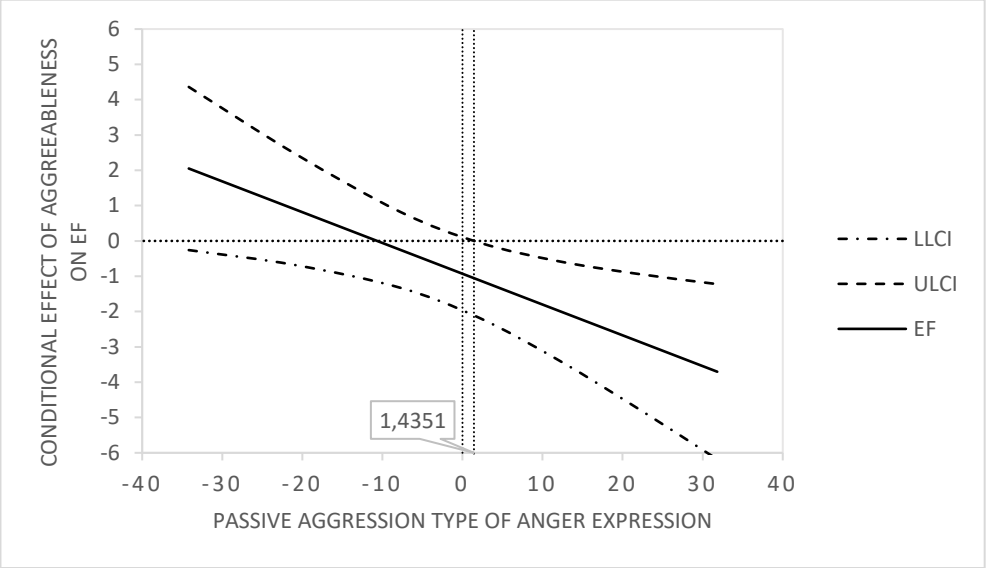

Figure 3.3 The Association between Agreeableness and Emotional Function for Different Values of Passive Aggression

Note. EF: Emotional function, LLCI: Lower limit confidence interval, ULCI: Upper limit confidence interval.

3.4.2.3 Moderator Role of Passive Aggression on Extraversion and Role-Function Restrictive of Migraine Association

The moderator variable of another moderation analysis was passive aggression on the association of extraversion and role-function restriction. According to the results, the whole model was marginally significant (R^2=.053, $F(3, 144) = 2.668$, $p = .05$) and the interaction was significant ($B = -0.049$, $SE = 0.022$, $p < .05$). The critical value was 16.098 ($B = -1$, $SE = 0.506$, $p = .05$, 95% CI [-2.000,0]). When passive aggression scores were above the critical value, extraversion and role-function restriction had a negative association (see Figure 3.4). Specifically, participants who were more extravert individuals had less role-function restriction scores which means lower health status if they were more passive aggressive individuals.

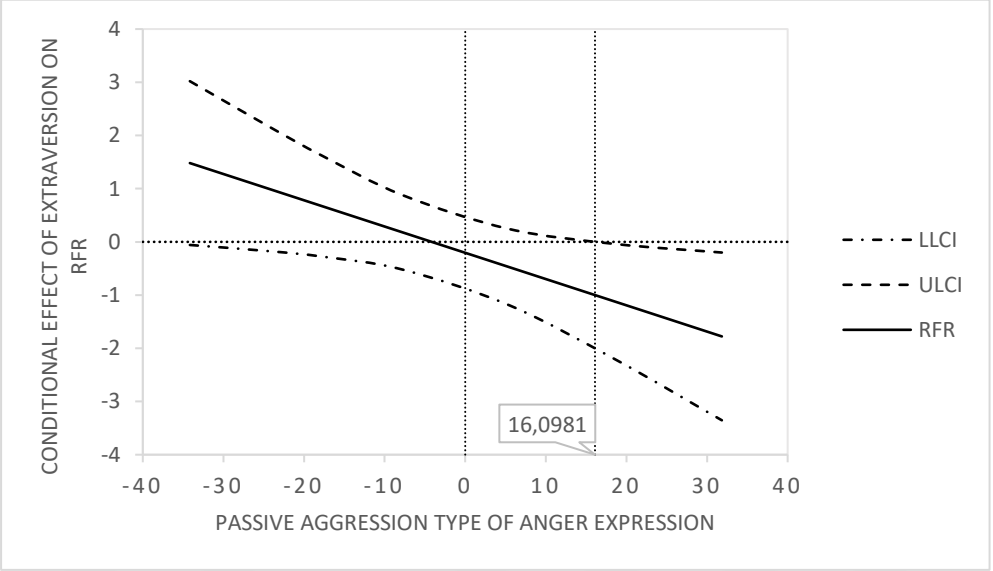

Figure 3.4 The Association between Extraversion and Role-Function Restriction for Different Values of Passive Aggression

Note. RFR: Role function restriction, LLCI: Lower limit confidence interval, ULCI: Upper limit confidence interval.

3.4.2.4 Moderator Role of Passive Aggression on Openness to Experience and Role-Function Preventive of Migraine Association

Another moderation analysis was conducted in order to examine the moderator role of passive aggression style of anger expression on the relation of openness to experience personality characteristics with role-function prevention (RFP) of migraine. Results showed that the whole model was significant (R^2=.073, $F(3, 142) = 3.826$, $p < .05$). The interaction was also significant ($B = -0.114$, $SE = 0.038$, $p < .01$). The conditional effect of openness to experience on role-function prevention was significant in two critical points of passive aggression, which were -14.280 ($B = 1.465$, $SE = 0.741$, $p = .05$, 95% CI [0, 2.930]) and 12.276 ($B = -1.564$, $SE = 0.791$, $p = .05$, 95% CI [-3.128,0]). When passive aggression scores were below -14.280 critical point, the association between openness to experience and role-function prevention was significant and positive (see Figure 3.5). In addition, when passive aggression scores were above the critical value of 12.276, the openness to experience and role-function prevention relation was also significant and negative (see Figure

3.5). On the other hand, when the passive aggression scores were above the critical value of -14.280 and at the same time below the critical value of 12.276, the relation between openness to experience and RFP were not significant. In other words, if the participants had lower passive aggression scores than critical value of -14.280, they had higher level of RFP (better health status), when they had more openness to experience scores. In addition, if the passive aggression scores of the participants were higher than the critical value of 12.276, they had lower level of RFP (lower level health status), when they had more openness to experience scores. The relationship between openness to experience and RFP was not significant when the participants had passive aggression scores between these two critical values. (See Figure 3.5).

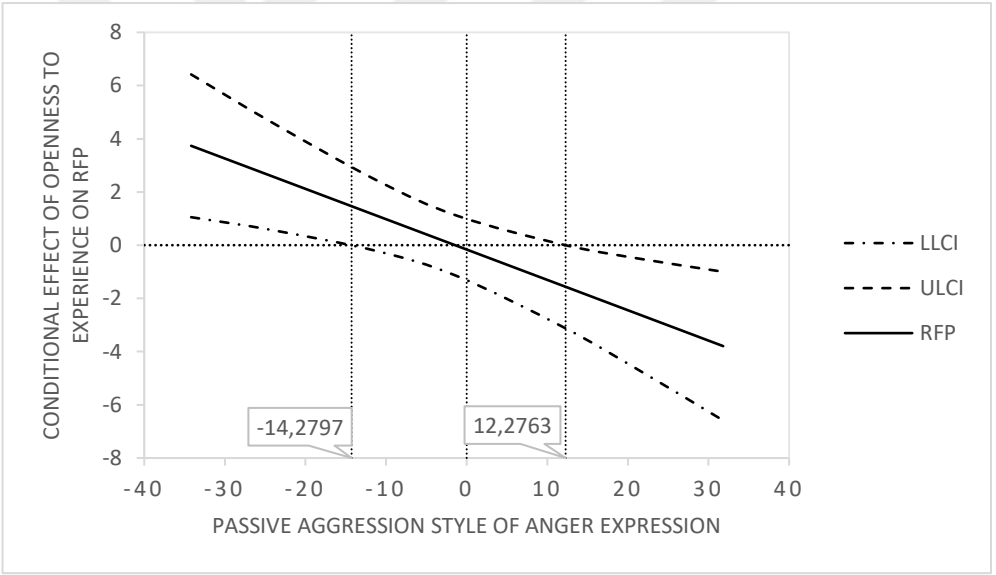

Figure 3.5 The Association between Openness to Experience and Role-Function Prevention for Different Values of Passive Aggression

Note 1. RFP: Role function prevention, LLCI: Lower limit confidence interval, ULCI: Upper limit confidence interval.

3.4.2.5 Moderator Role of Distributive Aggression on Neuroticism and Romantic Relationship Satisfaction Association

Finally, the moderator role of distributive aggression was examined on the association between neuroticism and relationship satisfaction. The whole model was significant (R^2=.577, $F(3, 146) = 2.981$, $p < .05$). The interaction was also significant ($B = 0.013$, $SE = 0.004$, $p < .05$). There were one critical values, which was 84.161 ($B = 0.345$, $SE = 0.175$, $p = .05$, 95% CI [0, 0.690]). Moreover, when the distributive aggression scores were above the critical value of 84.161, the relation between neuroticism and relationship satisfaction was significant and positive. (see Figure 3.6). That is to say, if participants had distributive aggression scores above the critical value of 84.161, they had higher relationship satisfaction scores when they had higher neuroticism scores.

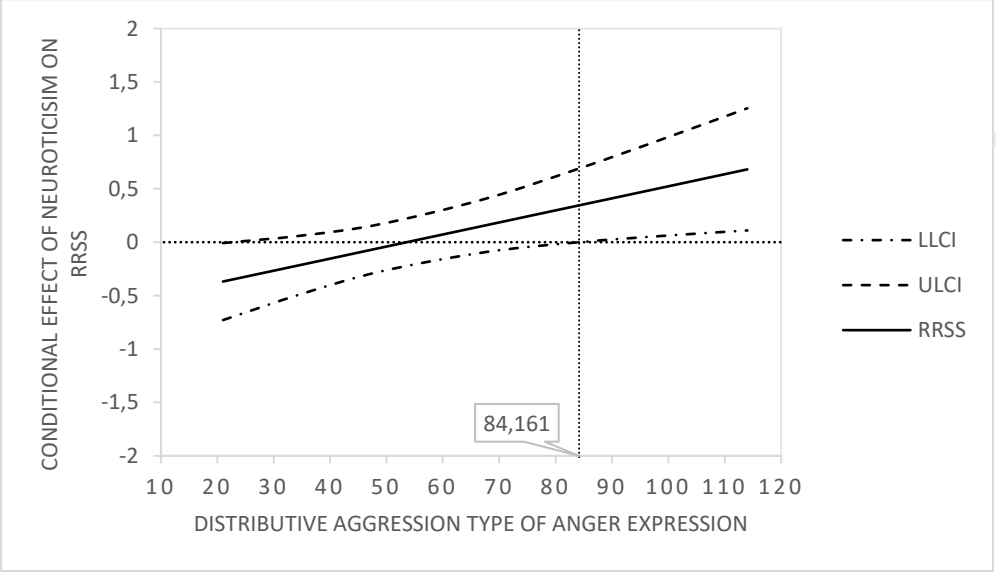

Figure 3.6 The Association between Neuroticism and Relationship Satisfaction for Different Values of Distributive Aggression

Note. RRSS: Relationship satisfaction, LLCI: Lower limit confidence interval, ULCI: Upper limit confidence interval.

3.4.2.6 Moderator Role of Solitude/Negative Behavior on Agreeableness and Emotional Function

The association between agreeableness and emotional function (EF) was examined with the moderator role of solitude/negative behavior type of sadness expression. According to the results, the whole model (R^2=.105, $F(3, 146) = 3.207$, $p < .05$) and the interaction (B = -0.087, SE = 0.033, $p < .01$) were significant. The critical value was 9.260 (B = -1.092, SE = 0.553, p = .05, 95% CI [-2.184,0]). When the solitude/negative behavior was above the critical value, the association between agreeableness and EF was significant and negative (see Figure 3.7). In other words, if the participants had higher solitude/negative behavior scores than the critical value, they had lower EF scores (lower health status), even when they were more agreeable.

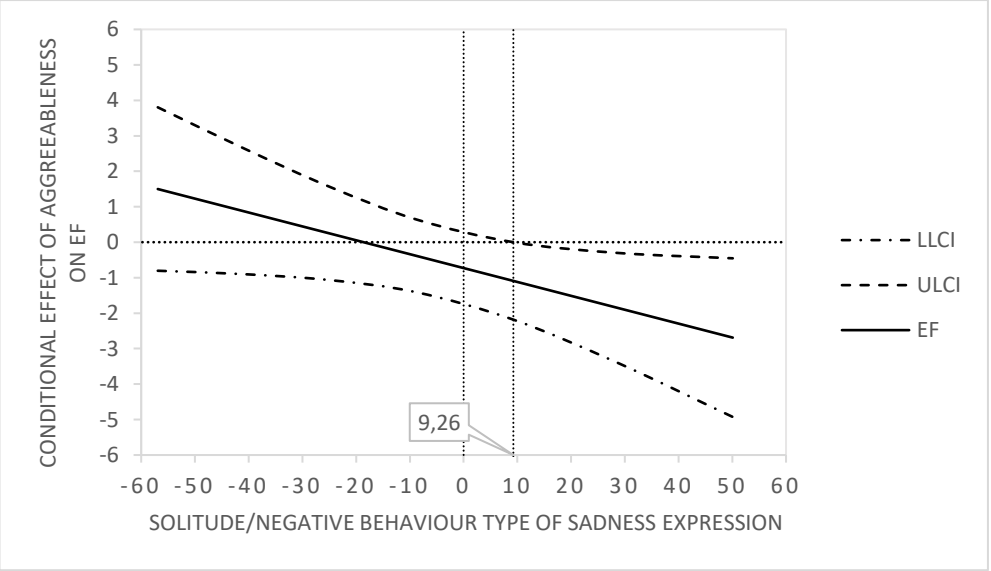

Figure 3.7 The Association between Agreeableness and Emotional Function for Different Values of Solitude/Negative Behavior

Note. EF: Emotional function, LLCI: Lower limit confidence interval, ULCI: Upper limit confidence interval.

Table 3.12 *The Summary of the Findings*

Independent Variable	Moderator	Dependent Variable	Moderation	Confidence Interval
Agreeableness	Passive Aggression	Role-Function Restrictive	Yes	Significant
Agreeableness	Passive Aggression	Emotional Function	Yes	Significant
Extraversion	Passive Aggression	Role-Function Restrictive	Yes	Significant
Openness to Experience	Passive Aggression	Role-Function Preventive	Yes	Significant
Neuroticism	Distributive Aggression	Relationship Satisfaction	Yes	Significant
Agreeableness	Solitude/Negative Behavior	Emotional Function	Yes	Significant

3.5 Discussion

The main aim of the present study was to investigate the predictive role of personality traits (i.e., extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valance) on quality of life (i.e., role function restriction, role function prevention, and emotional function) and relationship satisfaction of migraine patients; and the moderator role of emotional expression (i.e., distributive aggression, passive aggression, avoidance/denial, integrative assertion, solitude/negative behavior, social support/dependent behavior, positive activity, apology, denial, and explanations) on these relations. For this purpose, group differences among the levels of demographic variables (i.e., gender, relationship status, education, hometown, presence or absence of physical illness and psychological disorder) on the measures of the study (i.e., time since diagnosis, frequency of migraine, severity of migraine, duration of migraine, controllability of migraine, relationship satisfaction, quality of life); and correlations among the variables were examined. Afterwards, moderation analyses were conducted in order

to figure out the moderator role of emotional expression between the relations of personality traits with quality of life and romantic relationship satisfaction.

3.5.1 Preliminary Analysis - Differences among the Levels of Demographic Variables in terms of Study Measures

3.5.1.1 Group Differences among the Levels of Demographic Variables in Terms of Illness-Related Characteristics and Romantic Relationship Satisfaction

Independent samples *t*-tests were conducted to examine the group differences among the levels of gender, relationship status, presence or absence of physical illness and presence or absence of psychological disorder on time since diagnosis, frequency of migraine, severity of migraine, duration of migraine, controllability of migraine, and relationship satisfaction. According to the results, women had a sense of control over migraine more than men. Since the prevalence rates of chronic pain conditions of women are more than men (Berkley, 1997; Ertas et al., 2012; Unruh, 1996), the possibility of a woman to face with any pain related disease would be higher than man throughout the lifespan. Therefore, in the current study, it may be concluded that experience with pain might have increased women's coping mechanisms more than men in time and this might help them to feel control over pain. There is supportive evidence in the literature that control over pain reduces the pain sensitivity more for women compared to men. (Fillingim, Keefe, Light, Booker, & Maixner, 1996 as cited in Fillingim, 2000). Therefore, sense of control might be more developed in women than men.

Migraine patients who had no other physical illness had more severe migraine attacks than patients with at least one other physical illness. Migraine patients with another physical illness might have divided their attention to multiple physical illnesses, therefore their perceived severity might have decreased compared to migraine patients without another physical illness. Moreover, migraine patients with at least one other physical illness or with a psychological disorder were older than those who

did not have any other physical or psychological problems in the current study. It is clear that people develop more physical illness as they get older due to cell degeneration in the body, and they might develop more psychological illnesses, as suffering from migraine creates many disabilities in daily life. In addition, migraine patients with another physical illness in this study have suffered from migraine for longer times than migraine patients without another physical illness. Migraine is a condition that comorbid with many illnesses (Buse, Manack, Serrano, Turkel, & Lipton, 2010). Thus people who had migraine for longer times might have developed more comorbid illnesses with time.

A series of one-way ANOVAs were conducted to investigate the group differences among the levels of education and hometown of participants on time since diagnosis, frequency of migraine, severity of migraine, duration of migraine, controllability of migraine, and relationship satisfaction.

Results showed that participants with high school degree and lower had more severe migraine attacks than participants with graduate degree. Migraine has many psychological characteristics, and thus in the literature it has been characterized as a psychosomatic disorder by many researchers. In Turkey, it is known that people express themselves (their emotions, their thoughts etc.) in indirect ways like somatization and this trend increases while the education level decreases. In other words, people with lower education are prone to express themselves with an illness since illnesses are more solid and acceptable in the culture. Therefore, they might perceive migraine more severe than people with higher education (Nickel et al., 2006). Moreover, in the current study people with high school and lower education had lower relationship satisfaction than participants with undergraduate and graduate education. Findings contradictory to the results of the present study do exist in the literature. A study revealed that increase in the education level was related to sexual adjustment problems (Jose & Alfons, 2007). Similarly, in a study in Turkey, it was found that as education level increases, marital satisfaction decreases (Çağ, 2013). The romantic relationship satisfaction scale used in the present study did not measure

the sexual satisfaction of the participants, so it did not assess the same construct with the studies in the literature. The difference in the respective results between the current study and the literature might be related with this difference in measurement tools.

3.5.1.2 Group Differences among the Levels of Demographic Variables in Terms of Emotional Expression, Qaulity of Life, and Personality Traits

A series of multivariate analysis of variance (MANOVA) were conducted in order to investigate the group differences between the levels of gender, relationship status, presence or absence of physical illness and presence or absence of psychological disorder, education level, and participants' hometown on the measures of expression of sadness, expression of guilt, expression of anger, migraine specific quality of life, personality characteristics of the participants.

Regarding quality of life, women were affected by migraine more than men in terms of role function restrictive and role function preventive, whereas there was no significant difference in terms of emotional function. Studies revealed that women had more restriction of daily activities (Attanasio & Andrasik, 1987) and they missed work days more than men in a year due to migraine (Rasmussen, Jensen, & Olesen, 1992). On the other hand, according to studies, women and men did not differ in terms of emotional expression and self-blame characteristics (Buckelew et al., 1990) consistent with the present study. In addition, pain coping strategies (including emotional coping) were found to be similar in women and men (Strong, Ashton, & Stewart, 1994).

Considering anger expression, only avoidance/denial type was significantly different among the three levels of education. While the education level increased, avoidance/denial level decreased in the current sample. As stated previously, migraine is one of the psychosomatic disorders that Turkish people experience widely. One of the main characteristics of somatization is expressing emotion in an indirect way (or not to express them at all) like avoiding or denying the feeling,

which is consistent with the current finding. Moreover, a study conducted in Turkey revealed a finding parallel to our finding that migraine patients were more alexithymic than control group (Muftuoglu, Herken, Demirci, Virit, & Neyal, 2004). In addition, there were many findings stating that increase in the education level direct people to individualism, freedom, and self-confidence (Jose & Alfons, 2007) and this might lead people to express their emotions directly. So, our participants with higher education might have reported lower levels of avoidance/denial type of anger expression due to this factor.

Regarding personality traits, extraversion and agreeableness were significantly different in terms of psychological disorder history. Participants with psychological disorder history were more extraverted and agreeable than participants who did not have psychological disorder history. In the literature, there were consistent findings. For example, a study which investigating the association of personality traits and psychological disorders stated that agreeableness was not related to any of the disorder. Moreover, they found an association between low extraversion characteristic and psychological disorders (Kotov, Gamez, Schmidt, & Watson, 2010).

3.5.2 Findings Related to Moderation Analyses

In this part of the study, moderator role of expression of anger, sadness, and guilt (i.e., distributive aggression, solitude/negative behavior, and apology) in the relation of personality characteristics (i.e., neuroticism, agreeableness, extraversion) with quality of life (i.e., role-function restrictive, role-function preventive, and emotional function) and relationship satisfaction were examined. Only the significant results were reported and discussed.

3.5.2.1 Moderator Role of Passive Aggression on Agreeableness and Role-Function Restriction of Migraine Association

Regarding quality of life, passive aggression moderated the relation between agreeableness personality trait and role-function restriction (RFR) of migraine in the present study. According to results, when the migraine patients had lower level of passive aggression, there was no relation between agreeableness and RFR. However, when the migraine patients had higher level of passive aggression, agreeableness was related to RFR. In other words, migraine patients who had more agreeableness scores had less role-function restrictive (lower QOL), even if they used higher level of passive aggression as an anger expression. As mentioned previously migraine is a chronic pain condition which creates disability in patients' life widely (Ruiz de Velasco et al., 2003; Tkachuk, Cottrell, Gibson, O'Donnell, & Holroyd, 2003). In addition, agreeableness was characterized with high sociability. So, people with agreeableness get the support they need from this social areas (Wilkowski, Robinson, & Meier, 2006). However, migraine patients have difficulty to participate in a social activity especially when they are in a great pain during the attacks. Agreeable migraine patients who are characterized with social interactions might not feel free to express their feelings, which stemmed from not participating in social activities, directly to others owing to their prosocial behaviors (Wilkowski et al., 2006). The reason why they cannot express their feeling directly might be the fear of being hated and be alienated by significant others (Ruiz de Velasco et al., 2003). This situation might lead them to be more passive aggressive. Being passive aggressive might cause total misunderstandings by significant others and may result in losing the social support that they need to overcome the restrictions of migraine. Therefore, agreeable migraine patients may develop a perception that migraine restrict their life because of both having difficulty in participating in social activities and facing the possibility of losing social support because of their passive aggression.

3.5.2.2 Moderator Role of Passive Aggression on Agreeableness and Emotional Function of Migraine Association

Regarding quality of life, passive aggression moderated the relation between agreeableness personality trait and emotional function (EF) dimension of QOL in migraine, which was similar to previous result. Emotional function is another aspect of quality of life and it represents the patients' emotions emerging because of migraine. According to results, when the migraine patients had lower level of passive aggression, there was no relation between agreeableness and EF. However, when the migraine patients had higher level of passive aggression, agreeableness was related to EF. In other words, migraine patients who were more agreeable had lower level of EF (lower QOL), even if they use higher levels of passive aggression as anger expression. As explained in the previous finding, agreeable migraine patients may lose their social relationships, which they are afraid of, by being passive aggressive. Therefore, they might find themselves in vicious circle by being passive aggressive. In the end, they may start to feel even more negative emotions because of migraine. To sum up, using passive aggression as a way of emotion expression had negative consequences in terms of two aspects of quality of life (i.e., emotional function and role-function restriction) for agreeable migraine patients.

3.5.2.3 Moderator Role of Passive Aggression on Extraversion and Role-Function Restrictive of Migraine Association

Regarding quality of life, similar to two previous results, passive aggression moderated the relation between extraversion personality trait and RFR dimension of QOL in migraine. According to results, when the migraine patients had lower level of passive aggression, there was no relation between extraversion and RFR. However, when the migraine patients had higher level of passive aggression, extraversion was related to RFR. Specifically, participants who were more extraverted, had less RFR scores (i.e., lower QOL) if they were more passive aggressive individuals. As stated in the previous parts of the study, extraversion is a

trait characterized with sociability, positive affectivity, and activity (McCrae & Costa, 1987). Even though migraine was not related to extraversion characteristics in the literature, migraine patients who had high scores on extraversion, perceived migraine as quite restrictive particularly when they used passive aggression in the present study. Restricting the outside activity, choosing proper food and drink for migraine etc. are main physical restrictions that migraine creates in the patients' life. Therefore, it is quite understandable that people who think that sociality is important, perceive migraine as restrictive when they cannot go outside during attacks. In addition to this, when they use passive aggression, perception of restraints will be stronger. In the literature, there were similar ideas. Many theorist have stated that anger stems from either psychological or physical constraints (Darwin, 1872/1965; Izard, 1977; Lewis, 1993 as cited in Harmon-Jones & Harmon-Jones, 2016). Therefore, the reason why the migraine patients used passive aggression as an anger expression might be these physical and psychological constraints in the current study.

3.5.2.4 Moderator Role of Passive Aggression on Openness to Experience and Role-Function Preventive of Migraine Association

Considering quality of life, passive aggression moderated the relation between openness to experience personality trait and role-function preventive (RFP) of migraine. RFP is another aspect of quality of life which assesses how migraine prevents patients' daily life. Before presenting the current finding, it should be stated that openness to experience dimension had relatively low reliability in the present study. However, because the finding was important and consistent with the previous findings, it was reported and will be discussed. The reason why reliability of openness to experience dimension was low might be that the participants systematically misinterpreted one of the items, which was "geniş/rahat". The item is originally a positive item, however the participants might have perceived it as a negative one. If this item was deleted, reliability would increase. This could be explained by the migraine patients' attitude of resistance. While the scoring of openness to experience subscale was checked, it was clear that the participants had a

tendency to show positive characteristics and hide the negative ones. So, they gave the highest scores to positive items, and the lowest ones to negative items. Since they perceived “geniş /rahat” item as negative, they also marked it with the lowest scores. Their tendency to hide their negative characteristics may also be related with their tendency to be indirect in their communication (hide their real feelings) and this was consistent with the findings in the present study that they use passive aggression (indirect way of anger expression) in their relationships.

According to findings, when migraine patients had higher level of passive aggression, openness to experience was negatively associated to RFP. Additionally, when migraine patients had lower level of passive aggression, there was positive relation between openness to experience and RFP. However, if passive aggression level was between the high and low critical points, there was no significant relation between openness to experience and RFP. Specifically, participants who had higher levels of openness to experience scores had lower level of RFP scores, which means lower QOL if they had higher passive aggression scores. In addition, if migraine patients use lower level passive aggression, when they had higher openness to experience scores, their RFP was higher which is related to better QOL. This finding was also consisted with the previous three findings stated above. Openness to experience personality trait is characterized with actively seeking new experiences, curiosity, and they feel whole spectrum of emotions (Costa & Widiger, 1990). When open migraine patients face with a condition that prevents their life and new experiences, they might feel angry and express it with passive aggression. In other words, if migraine patients use passive aggression as anger expression widely, their quality of life decreases even if they are highly open individuals. In addition, if migraine patients use lower levels of passive aggression, their quality of life would be higher, when they had more openness to experience characteristics. Although open people experience whole range of emotions (Costa & Widiger, 1990), expression may be restricted by cultural values. According to Kağıtçıbaşı (2007), Turkish people are willing to show their emotions in an either active or passive way

rather than inhibiting them. Therefore, migraine patients might have chosen to express their emotions not actively but passively in the current study.

In summary, current findings revealed that passive aggression is a determinant factor between personality characteristics and quality of life for migraine patients. Even though migraine patients had positive, social, and psychologically resilient personality traits (agreeableness, extraversion, openness to experience), when they use passive aggression which is an indirect type of anger expression, they perceive migraine as more restrictive, preventive, and emotionally challenging.

These findings showed a general picture of the role of emotional expression on the relation of personality and quality of life. According to cognitive appraisal approach, anger is an emotion that arises as a reaction to appraisal of a blocked goal. Therefore, Harmon-Jones and Harmon-Jones (2016) stated that pain may create anger because of blocking person's goal of being physically comfortable. Thus, expression of anger in an appropriate way came into prominence for migraine patients with the help of present study's findings. Teaching expression of negative emotions by therapeutic intervention and assessing the effects of intervention will be the focus of the Study 3.

3.5.2.5 Moderator Role of Distributive Aggression on Neuroticism and Romantic Relationship Satisfaction Association

Considering romantic relationship satisfaction, distributive aggression moderated the relation between neuroticism personality trait and romantic relationship satisfaction (RRSS). Specifically, if participants had higher distributive aggression scores, they had higher RRSS scores when they had higher neuroticism scores. There was an association between neuroticism and RRSS only if migraine patients used higher level of distributive aggression. Distributive aggression is a destructive type of anger expression and people with distributive aggression threaten and discourage the other person (DeGiovanni & Epstein, 1978; Rimm et al., 1974). Neuroticism is a personality trait characterized with "emotional instability, difficulty in tolerating the frustration, self-consciousness, and impulsivity" (Costa & Widiger, 1990, p. 3).

Migraine patients with high levels of neuroticism may be highly impulsive and self-centered individuals without insight, therefore they may perceive their romantic relationship satisfaction as high even if they use a kind of destructive type of anger expression. Since, they are self-centered individuals, empathizing with the other person would be difficult for them, and so they may not be able to perceive their relationships from the eyes of the significant other. This may cause them to report higher relationship satisfaction. Neuroticism is a personality characteristic mainly associated with migraine in the literature (Cao et al., 2002 as cited in Luconi et al., 2007; Merikangas et al.,1993). However, in the present study, the association between migraine and neuroticism could not be explained adequately. This situation may be explained by migraine patients' resistance and tendency to hide their feelings and their self.

3.5.2.6 Moderator Role of Solitude/Negative Behavior on Agreeableness and Emotional Function

This finding was the only one in which one of the sadness expression types had a moderator role. This implied that sadness expression might not play a vital role for migraine patients. Lack of sadness and guilt expression moderators except the current finding needs further research. In addition, sadness is a self-oriented emotion. Therefore expressing sadness to others might not have had a moderator role between personality and quality of life of migraine patients.

Considering quality of life, solitude/negative behavior moderated the relation between agreeableness personality trait and emotional function (EF) of migraine. Particularly, if the participants had higher solitude/negative behavior scores, they had lower EF scores (lower QOL), even when they were more agreeable.
Solitude/negative behavior type of sadness expression is characterized with accusing the other person, having the desire to be alone, and not interacting the other person (Guerrero et al., 2008) which is a destructive type of sadness expression. Agreeable people do not have the destructive type of personality, because they are characterized

with “soft-heartedness, empathy, helpfulness, and forgiving” (Costa & Widiger, 1990, p. 3). Therefore, this finding was not consistent with the literature. Underlying reason of this inconsistent finding may be the nature of the migraine. As explained previously, life restrictive and preventive nature of migraine leads agreeable migraine patients to be more destructive in their communication with others. In this way, when they use higher levels of solitude/negative behavior, even if they are more agreeable people, their emotional function will be lower.

3.5.3 Strengths of the Study

To begin with, the most important contribution of the present study is providing valuable and applicable information to literature. Migraine, emotion, and emotional inhibition have been studied in the literature; however, the moderator effects of different emotion expression types on the relations of personality traits with quality of life and romantic relationship satisfaction has not been studied so far within my knowledge. This detailed research has provided applicable data for treatment, as well as providing preliminary knowledge about the precipitating factors of migraine which has not been uncovered so far. Study 3, which is an emotional expression group psychotherapy study, was designed according to the results of the current study. Specifically, migraine patients’ preference of passive aggression as an anger expression and its negative consequences came to light with the help of this study. This general conclusion was one of the most important factors that shaped the content of the group psychotherapy in Study 3. Therefore, the implications of the current study are available in the Study 3.

The sample of the study consisted of migraine patients from different regions of Turkey. In addition, having participants from different age groups, education levels, marital statuses, and income levels makes the current study more generalizable. Studying with a clinical sample, which was hard to reach and gather data, was another strength of the current research. Thus, the present study also provided data about illness related characteristics of migraine in Turkish population.

These results about passive aggression might also use in media. To illustrate, advertisements and brochures might be prepared about the disadvantages of using passive aggression as an anger expression for public. This might provide alternative preventive intervention for migraine patients and it contributes the general health of the public in Turkey.

3.5.4 Limitations and Suggestions for Future Studies

The most important limitation of the present study was its reliance on participants' reports on their migraine diagnosis. The most important criterion that the participants must meet was having an official diagnosis of migraine and this information was based on the participants' own declaration. In the future studies, assurance of the official diagnosis may be obtained from medical professionals or medical reports.

About sample, the high education level might be one of the limitation of this study. Sample should have been chosen from more varied level of education. This might increase the generalizability of the current study.

When examining the results of the moderation analyses, although passive aggression type of anger expression gave important clues about the association between personality traits and quality of life, further studies needed to fully understand the reasons why other negative emotional expressions did not moderate these relations. Furthermore, although neuroticism was one of the most illness prone personality characteristics (Cao et al., 2002 as cited in Luconi et al., 2007; Merikangas et al.,1993), there were not enough indicators of this in the current study. Neuroticism was only related to romantic relationship satisfaction through the moderation effect of distributive aggression. Further research is needed to find out why neuroticism was not related with other emotional expression types.

Lastly, a comparaison with non-migraine patient group might provide broader knowledge about all relatisons among study variables and this will lead wide range of

study questions. Therefore, it is recommended for future studies that include this comparision to their research.

CHAPTER 4

STUDY 3: EMOTIONAL EXPRESSION INTERVENTION FOR MIGRAINE PATIENTS: A GROUP THERAPY

4.1 Literature Review of Study 3

4.1.1 Interventions for Chronic Illnesses

As indicated previously in the Study 2, migraine is a chronic condition, which decreases the quality of life of the patients and ruins their daily life in many aspects. Although researchers have been trying to find out the etiology of migraine, they could not clearly identify the factors that contribute to its development and the exact cure for it. This situation motivated researchers to find alternative ways to offer help to the patients. Besides medical treatment of migraine, psychotherapy is one of the most referenced technique used by the researchers and practitioners to offer a treatment to migraine and migraine related outcomes. Thus, the next section will focus mainly on intervention techniques that are used for the treatment of chronic illnesses.

Many psychological intervention techniques, including family therapy, cognitive behavioral therapy (CBT), relaxation training, written emotional disclosure, have been used for migraine and other chronic illnesses so far In this section, in addition to psychological interventions for migraine, interventions for other chronic conditions were also given a place, since they have many similarities with chronic migraine headache.

4.1.2 Family Therapy for Chronic Illnesses

The literature has been paying attention to the effects of family dynamics to pain-related illnesses, because family dynamics have been thought to influence both the reasons and the outcomes of the chronic illnesses. For example, in a study conducted with chronic head pain patients, researchers applied problem-centered family systems therapy to eight couples and they compared them with their counterparts who dropped out from the study before the intervention. According to their results, couples who completed the therapy showed better quality of communication compared to control group couples, and also their marital and sexual satisfaction were higher than the control couples'. Moreover, they were more skilled in the areas of emotional expression and behavioral control than the control group couples. Furthermore, researchers found out that couples who did not complete the therapy (control group) needed the illness in order to reach an equilibrium in their relationship which caused the state of illness to be persistent (Roy, 1989). Therefore, as mentioned above, family dynamics -and indirectly family therapy- have been an attention point of the researchers who have been studying with chronically ill patients.

A study conducted with psychogenic pain patients, is another example of a family therapy practice for chronically ill patients. Researchers applied different types of therapies, such as family-based therapy and emotional expression therapy to psychogenic pain patients and they drew many conclusions. They reported that therapeutic intervention itself provided an enhancement in emotional expression level and emotional awareness irrespective to therapy type. Moreover, depending on the therapy type, initial family dynamics were more predictive of ongoing levels of depression and psychogenic pain than emotional expression itself. Furthermore, any intervention including family communication and trying to enhance the quality of emotional expression between partners predicted less psychogenic pain and depression than individual patient-centered interventions (Beutler et al., 1988).

Studies including family therapy underlined the importance of any kind of intervention technique to family especially for chronically ill patients because the family of the chronically ill patients are the ones who are exposed to the most stressors. Therefore, in order to ease one part of the difficulties that chronically ill patients and their families face with, emotional expression of the patients were aimed to increase in the current study.

4.1.3 Cognitive Behavioral Therapy for Chronic Illnesses

Although the literature underlined the importance of family therapy in chronic illnesses, there were also many research using individual and group-based therapies. One of the most frequently used such therapies is cognitive behavioral therapy (CBT), which was mostly used for migraine, tension-type headache, and chronic fatigue syndrome. To illustrate, in a study, researchers assessed the effectiveness of CBT for comorbid migraine, tension-type headache, and depression. They conducted a 50-minute-long, 12-session, individual, functional model CBT and they found that CBT was effective for alleviating migraine symptoms and depression and improving quality of life of the patients when compared to control group (Martin et al., 2015). In another research conducted with disabling headache patients, participants attended to a 10-session cognitive behavioral group therapy. The outcome variables were frequency, intensity and duration of headache, medication use, and quality of life. According to the results, participants who attended to CBT group for ten weeks showed 50% progress in headache frequency and they also had significant improvements in medication use and quality of life (Nash, Park, Walker, Gordon, & Nicholson, 2004). A review study examined many CBT therapy implication studies for headache patients, and revealed a general conclusion that CBT was effective for reducing the physical symptoms of headache. However, they also criticized the adequacy of the methodology of studies they reviewed (Harris, Loveman, Clegg, Easton, & Berry, 2015). Another recent study by Poppe, Petrovic, Vogelaers, and Crombez (2013) tried to explain the effectiveness of CBT with other variables, such as initial neuroticism and acceptance. According to their results, low level of pre-

treatment acceptance and high neuroticism predicted more mental quality of life of the headache patients.

In summary, CBT is not only frequently used psychotherapy technique for chronic illnesses, but it is also one of the most effective ones. Therefore, it attracted both researchers and practitioners. However, since the main focus of the present study was emotional expression training, CBT was not used as a main technique.

4.1.4 Relaxation Training and Written Emotional Disclosure for Chronic Illnesses

As stated above, the main concern of the current study is to examine the effectiveness of the emotional expression techniques, in the following section, it will be summarized the effectiveness of relaxation training (RT) and written emotional disclosure (WED) for chronic conditions.

There are conflicting findings about the effectiveness of relaxation training and written emotional disclosure for migraine and other chronic headaches. For example, (D'Souza, Lumley, Kraft, & Dooley, 2008) designed their study to compare two different types of interventions, i.e., relaxation training and written emotional disclosure (WED), on migraine and tension-type headache which were. Relaxation training was designed as a 4-session audiotaped relaxation program including muscle relaxation and breathing exercises. In this program, participants sat in a comfortable chair and they just listened the audiotaped instructions on their own. Written emotional disclosure was designed as a 4-session program and participants were requested to write about a stressful event, deepest feelings which they could not tell anyone before and the effects of headache to their relationship and their health. The findings revealed that the efficacy of the audio-based relaxation training (RT) exceeded the control group in three outcome variables, which were severity, disability and physical symptoms of the tension-type headache; however, it was only effective in severity in migraine headaches. On the other hand, they found that written emotional disclosure was ineffective in all the outcome variables for both

migraine and tension-type headaches. It was concluded that RT was more efficient than WED for tension-type headache but none of the intervention types was superior than others in case of migraine.

Over and above the studies mentioned before, Kraft and friends (2008) added moderator variables (i.e., emotional approach coping skills and headache management self-efficacy) to their study to explain possible reasons of the inefficacy of the WED. Their results revealed that participants with more emotional approach coping skills showed more improvement in several outcome variables after WED as compared to RT and control group. Moreover, lower headache management self-efficacy before treatment predicted more improvement after both RT and WET than control group. Also, participants with less headache management efficacy before the treatment benefited from treatments more than their counterparts with more management efficacy.

Before proceeding to examine the psychotherapies targeting emotional expression, it is important to fully understand the effects of written emotional disclosure on different chronic illnesses, such as chronic pain and breast cancer. This is exemplified in the work of Graham, Lobel, Glass, and Lokshina (2008). Researchers randomly assigned participants into two groups, one of which was given some instructions to write their anger constructively and the other one was asked to write their goals unemotionally. Writings were coded in terms of their degree of anger expression and degree of meaning making. Results indicated that after nine weeks, there was a significant improvement in anger expression group in terms of control over pain, depressed mood, and marginally significant enhancement in terms of pain severity as compared to control group. Moreover, in another study, written emotional expression induced to early-stage breast cancer patients, decreased the rates of requesting medical help about cancer-related complaints (Stanton et al., 2002). In another research, which was also conducted with breast cancer patients, researchers made patients express their negative emotions in a written format while they were getting a psychosocial help via internet-based bulletin boards. According to the

results, the more the patients expressed their anger, the higher their quality of life and the lower their depressive symptoms were. In contrast, expressing fear and anxiety was related to lower quality of life and higher depression (Lieberman & Goldstein, 2006).

Emotional expression was not used only in the studies in written format but also in verbal format in therapy sessions. Slavin-Spenny and colleagues (2013) conducted a study which offered anger awareness and expression training (AAET) to one group and relaxation training (RT) to another group. The results unveiled that although AAET was effective for managing headaches, it did not exceed RT group. However, it was only AAET (not RT or control group) decreased the level of alexithymia of the patients.

In this section, intervention studies targeting chronically ill patients were reviewed. In the following section the theoretical background, aims and hypotheses of the current study will be presented.

4.1.5 Theoretical Background of the Intervention

The importance of expressing feelings in chronic illnesses was indicated many times so far. As mentioned in Study 2, inhibition of any emotion is closely related to illnesses. For example, studies on inhibition process and its effects to physical health proved that when people hide what they feel in the moment, their respiration increases. Moreover, inhibition process creates a very stressful situation for them and they become more vulnerable to illnesses (Pennebaker, 1997). Thus, the aim of Study 3 was to develop, implement and test the effectiveness of an emotional expression intervention to migraine patients.

Intervention program of current study was based on Yalom's (2002) Theory and Practice of the Group Psychotherapy. According to Yalom, establishing a group, determining the rules, adaptation to group and termination phases had to be handled

one by one. Therefore, in the current study, framework of the group intervention was dependent on the Yalom's theory.

On the other hand, the content of the group therapy was constructed in the light of emotional expression literature and researcher's personal therapeutic experiences.

Healthy emotional exhibition concept features similar characteristics in every study or practice. Researchers who are interested in emotion and emotional expression generally mention emotional awareness, identification of emotions, and expression of emotions concepts. For instance, a group of researchers who Paul Eckman -one of the most prominent scientists in the field of emotion- are part of, have designed an emotional training to reduce participants' negative emotions. The training program included emotional components such as recognition of emotion, compromising one's own emotional patterns, recognition of the others' emotions, and empathy (Kemeny et al., 2012). Similarly, Illionis University Counseling Center published a self-help brochure about emotional experience and expression which included the similar concepts with Kemeny and friends' (2012) study. The concepts that they used for emotional experience and expression were identifying emotions, accepting and valuing feelings, the role of interpretation, and expressing feelings (University of Illinois Urbana-Champaign Counseling Center, 2017). To conclude, researchers and practitioners who study and apply emotional expression agree on more or less the similar concepts. Therefore, while designing the intervention program of the present study, it was mostly benefited from these concepts.

Based on the intervention techniques used in the literature, the intervention program of the current study emphasized being aware of emotions, identifying emotion, giving value to emotions, analyzing the different interpretations, and expressing the emotions in constructive ways. Different from the other studies, the current intervention program was designed for three negative emotions; anger, sadness, and guilt.

4.2 Aim and Hypotheses

4.2.1 Aims of the Study 3

The aim of current study was enhancing the quality of life and romantic relationship satisfaction of the migraine patients by teaching them to comprehend and process, and express their emotions. In this respect, Study 3 aimed to investigate the effect of emotional expression training given to the migraine patients in terms of emotional expression, quality of life and romantic relationship satisfaction.

Specific objectives of the intervention were to teach the participants to recognize their feelings, understand why the feelings appear, give meaning to their feelings or understand the mechanism under it, accept their feelings, and express them constructively in a communication. In addition to this, giving information about migraine and providing an awareness of its symptoms, precipitating factors and consequences was another important objective of the intervention. In accordance with the objectives mentioned above, psychoeducational and encounter group approaches were used. In every session, firstly, group leader (clinical psychotherapist) gave information about the topics stated above. After the psychoeducation, the group started to share their experiences about the subject and they gave and took feedback from each other.

4.2.2 Research Hypotheses

Research hypotheses of Study 3 are as follows;
(1) After receiving emotional expression training, migraine patients' QOL would be significantly higher than before.
(2) After receiving emotional expression training, migraine patients' romantic relationship satisfaction would be significantly higher than before.
(3) After receiving emotional expression training, migraine patients' negative emotional expression types (i.e., distributive aggression, passive aggression,

avoidance/denial, solitude/negative behavior, denial), would be significantly lower than before.

4.3 Method

4.3.1 Participants

The participants of Study 3 were 9 migraine patients who met the inclusion criteria of being married or having romantic relationship at least for the last 6 months. All the participants were women (100%). The age range of the participants was between 21 and 42 with a mean of 29.33 (*SD* = 6.48)

Of the 9 participants, 8 participants reported themselves as a member of middle income group (88.9%) and 1 participant reported herself as a member of high income group (11.1%). Five participants (44.4%) had undergraduate degree and 4 participants had graduate degree (55.6%). The distribution of the participants according to place where they had grown up was as follows: 8 of them grew up in metropolis (88.9%), and 1 of them grew up in a city (11.1%). Finally, the relationship status of the participants was as follows: 4 of the participants (44.4%) had been married at least for the last 6 months and 5 of them (55.6%) had a romantic relationship at least for the last 6 months (see Table 4.1 for the demographic characteristics of the sample)

Table 4.1 *Demographic Characteristics of the Sample of Study 3*

	M	*SD*	*n*	*%*	*Min-Max*
Gender					
Female			9	100	
Age	29.33	6.48			21-42
Income					
Middle			8	88.9	
High			1	11.1	
Education					
Undergraduate			5	55.6	
Graduate			4	44.4	

Table 4.1 (continued)

	M	*SD*	*n*	*%*	*Min-Max*
Hometown					
City			1	11.1	
Metropolis			8	88.9	
Relationship Status					
Married			4	44.4	
Romantic Relationship			5	55.6	

Time since diagnosis of migraine varied between 24 months and 192 months (*M* = 100, *SD* = 64.34). In addition, the frequency of the migraine attacks of the sample for the last three months differed between 3-40 days with a mean of 14.67 (*SD* = 11.81), and the duration of their migraine attacks was between 2-48 hours with a mean of 19.22 (*SD* = 16.04). Participants evaluated the severity and controllability of their migraine attacks on a 10-point scale and they reported the severity of their attacks with a mean of 7.67 (*SD* = 1.12), and the controllability with a mean of 3.78 (*SD* = 1.79). While 55.6% of the participants (*n* = 5) stated that they had no physical illness, 44.4% of them (*n* = 4) had at least one physical illness in addition to migraine. Finally, 22.2% of the sample (*n* =2) reported at least one psychological disorder, and 77.8% of them (*n* = 7) reported no psychological disorder (see Table 4.2 for the illness-related characteristics of the sample).

Table 4.2 *Illness-Related Characteristics of the Sample of Study 3*

	M	*SD*	*n*	*%*	*Min-Max*
Time Since Diagnosis (months)	100	64.34			24-192
Frequency (days)	14.67	11.81			3-40
Duration (hours)	19.22	16.04			2-48
Severity	7.67	1.12			1-10
Controllability	3.78	1.79			1-10
Physical Illness					
Yes			4	44.4	
No			5	55.6	

Table 4.2 (continued)

		M	*SD*	*n*	%	*Min-Max*
Psychological Disorder						
	Yes			2	22.2	
	No			7	77.8	

4.3.2 Measures

Seven measures used in this study were chosen from measures of the Study 2. They were Demographic Information Form (DIF), Anger Expression Scale, Sadness Expression Scale, Guilt Expression Scale, Migraine Specific Questionnaire (MSQ), and Romantic Relationship Satisfaction Scale (RRSS). Please see Study 2 for the psychometric properties of the scales.

4.3.3 Procedure

To begin with, an e-mail was sent to the participants who participated in the Study 2 and were living in Ankara. Ankara was chosen because the suitable conditions for group therapy could only be provided by Middle East Technical University Psychology Department. Thirty-five participants who lives in Ankara from Study 2 were sent an e-mail about whether or not they wanted to participate in an 8-week group therapy intervention. Seven participants replied to this e-mails. Then, a social media announcement was made and 5 individuals reported their willingness to participate in the Study 3. Totally, 12 participants decided to join the group therapy sessions voluntarily. Nine participants came to the first session and none of the participants dropped out throughout the sessions. In the selection process, participants were not selected based on their emotional expression scores because of inadequate numbers of volunteers.

4.3.3.1 Intervention Program

The intervention was planned as a short-term psychoeducational group psychotherapy. Accordingly, the aims of the group therapy were determined as providing a basic information about migraine, stating the importance of emotional expression, and teaching the basic steps of emotional expression. Besides, one of the most important objectives was to make the participants share their thoughts and emotions regarding the subjects that were mentioned above. Establishing the group, determining the group rules, adaptation, and termination phases was structured according to Yalom's (2002) Theory and Practice of the Group Psychotherapy book. The group was planned as an 8-week (90 minutes each) closed group. The content of each session was briefly mentioned below.

1. Session: General aims of the first session was introducing the purpose of the intervention, giving information about the process and content of the intervention.
    - Explaining the purpose of the meetings
    - The importance of the group intervention for migraine patients
    - Introduction of the group members
    - Setting the group rules, making a contract with group members
    - Warming up activities
    - Sharing experiences about migraine and disabilities that it creates
2. Session: General aim of the second session was introducing emotional expression to the group members.
    - Summarizing the last session
    - Continue to warm up
    - Sharing experiences about migraine and disabilities that it creates
    - Introduction to the steps of emotional expression
3. Session: General aim of the third session was discussing the first step of emotional expression.
    - Summarizing the last session

- Discussing identification of the emotion.
- Enabling sharing personal experiences about identification of emotions

4. Session: General aim of the fourth session was discussing the second step of emotional expression.
    - Summarizing the last session
    - Discussing acceptance of emotions.
    - Enabling sharing the personal experiences about acceptance of emotions
5. Session: General aim of the fifth session was discussing the third step of emotional expression.
    - Summarizing the last session
    - Discussing expression of emotions.
    - Enabling sharing the personal experiences about expression of emotions.
6. Session: General aim of the sixth session was to continue with sharing personal experiences about all of the steps of emotional expression.
    - Summarizing the last session
    - Discussing expression of emotions.
    - Sharing the personal experiences about expression of emotions.
7. Session: General aim of the seventh session was preparing the group for ending and receiving feedback.
    - Summarizing the last session
    - Receiving feedback about the intervention
    - Preparing the group for ending of the meetings
8. Session: General aim of the eighth session was finalizing the intervention.
    - Summarizing the whole group experience
    - Giving feedback for whole group experience and giving personal feedback to group members
    - Directing and leading the patients for further therapy if needed
    - Saying goodbye

4.4 Results

Related-samples Wilcoxon signed-rank test was conducted in order to determine whether there is a median difference between pre and post measurements of emotional expression (distributive aggression, passive aggression, avoidance/denial, integrative assertion, solitude/negative behavior, social support/dependent behavior, positive activity, apology, denial, and explanations), migraine specific quality of life (role function prevention, role-function restriction and emotional function) and romantic relationship satisfaction. Assumptions were tested. Since the distribution of the differences between pre- and posttest was asymmetrical, Wilcoxon signed-rank test was not conducted for relationship satisfaction variable.

4.4.1 Related-Sample Wilcoxon Signed-Rank Test for Emotional Expression

Data obtained from 9 participants were analyzed to understand the effectiveness of 8 group psychotherapy sessions on emotional expression types of three emotion (i.e.,anger, sadness, and guilt) mentioned above. According to results, none of the analyses was significant except passive aggression which was an anger expression type. Of the 9 participants recruited to the study, group therapy led to a decrease in passive aggression scores when 8 participants' pre- and post-tests were compared. However, one participant showed no significant change in passive aggression scores. The Wilcoxon signed-rank test determined that there was a statistically significant median decrease in passive aggression scores (*Mdn* = -6), when the pre-test (*Mdn* = 51) and post-tests (*Mdn* = 40) scores were compared, *Wilcoxon z* = -2.539, $p < .05$.

There was no significant median difference between pre and post measurements in terms of distributive aggression (*Wilcoxon z* = -0.533, $p = .59$), avoidance/denial (*Wilcoxon z* = -1.899, $p = .058$), integrative assertion (*Wilcoxon z* = -1.259, $p = .21$), solitude/negative behavior (*Wilcoxon z* = -1.482, $p = .14$), social support/dependent behavior (*Wilcoxon z* = -1.248, $p = .21$), positive activity (*Wilcoxon z* = -0.415, $p = .68$), apology (*Wilcoxon z* = -0.415, $p = .68$), denial (*Wilcoxon z* = -0.416, $p = .68$), and explanations (*Wilcoxon z* = -0.526, $p = .6$) (See Table 4.3)

Table 4.3 *Related-Sample Wilcoxon Signed-Rank Test for Pre-test and Post-test Measurements of Emotional Expression*

	Pre-test	Post-test	Difference	Significance Test
	MDN	*MDN*	*MDN*	*Z*
Pas	51	40	-6	*Wilcoxon z* = -2.539*
Dis	63	54	-5	*Wilcoxon z* = -0.533
Avo	27	37	-8	*Wilcoxon z* = -1.899
Int	41	42	-3	*Wilcoxon z* = -1.259
Sol	98	88	-10	*Wilcoxon z* = -1.482
Dep	61	72	-1	*Wilcoxon z* = -1.248
Pos	41	39	-1	*Wilcoxon z* = -0.415
Apo	84	87	-2	*Wilcoxon z* = -0.415
Den	32	31	2	*Wilcoxon z* = -0.416
Exp	37	34	0	*Wilcoxon z* = -0.526

*Note 1. *p < .05*

Note 2. Pas: Passive aggression, Dis: Distributive aggression, Avo: Avoidance, Int: Integrative assertion, Sol: Solitude/Negative behavior, Dep: Social Support/ Dependent bahavior, Pos: Positive activity, Apo: Apology, Den: Denial, Exp: Explanations

4.4.2 Related-Sample Wilcoxon Signed-Rank Test for Quality of Life

Data obtained from 9 participants were analyzed to understand the effectiveness of 8 group therapy sessions on role function prevention of migraine attacks as measured by applying the MSQ questionnaire before and after the intervention. There was no significant median difference between pre- and post measurements in terms of the role function prevention of the participants, *Wilcoxon z* = 1.895, *p* =.058.

Another related-samples Wilcoxon signed-rank test was conducted with nine participants to determine the effectiveness of 8 group therapy sessions on emotional function of migraine attacks as measured by applying the MSQ questionnaire before and after the intervention. There was no significant median difference in terms of emotional function of the participants, *Wilcoxon z* = 1.866, *p* =.062.

Finally, related-samples Wilcoxon signed-rank test was repeated with nine participants to determine the effectiveness of 8 group therapy sessions on role function restriction of migraine attacks as measured by the administration of MSQ before and after the intervention. According to results, of the 9 participants recruited to the study, group therapy elicited an increase in role function restriction scores when it was compared pre-post measurements of 7 participants, whereas one participant showed no improvement and one participant showed a decrease in role function restriction scores. The Wilcoxon signed-rank test determined that there was a statistically significant median increase in role function restriction scores (*Mdn* = 14.29), when comparing the pre (*Mdn* = 51.43) and post-tests (*Mdn* = 68,57), *Wilcoxon z* = 1.963, $p < .05$. (See Table 4.4)

Table 4.4. *Related-Sample Wilcoxon Signed-Rank Test for Pre-test and Post-test Measurements of MSQ*

	Pre-test	Post-test	Difference	Significance Test
	MDN	*MDN*	*MDN*	*Z*
RFR	51.43	68,57	14.29	*Wilcoxon z* = 1.963*
RFP	65	90	15	*Wilcoxon z* = 1.895
EF	66.67	86.67	13.33	*Wilcoxon z* = 1.866

*Note 1. *p < .05*

Note 2. RFR = Role-Function Restrictive, RFP = Role-Function Preventive, EF = Emotional Function

4.5 Discussion

The main aim of current study was enhancing the quality of life and marital satisfaction of the migraine patients by teaching them to comprehend, process, and express their emotions. In this respect, Study 3 mainly aimed to investigate the effect of emotional expression training given to the migraine patients on their quality of life and marital satisfaction. In addition, to figure out the effectiveness of the treatment, the change in emotional expression was investigated. To examine the differences between pre-post test results in terms of quality of life [i.e., role-function restrictive

(RFR), role-function preventive (RFP), emotional function(EF)] and romantic relationship satisfaction, and emotional expression types (i.e., passive aggression, solitude/negative behavior, and apology), related-samples Wilcoxon signed-rank test was conducted.

4.5.1 Related-Sample Wilcoxon Signed-Rank Test for Quality of Life

Regarding quality of life, related-sample Wilcoxon signed-rank test was conducted to examine the median differences between pre- and post-test in terms of quality of life (i.e., RFR, RFP, and EF). There was only one significant median difference between pre- and post intervention measurements regarding quality of life, which was RFR. These results revealed that eight-session emotional expression group psychotherapy was effective for increasing RFR dimension of quality of life. In the literature, there were supporting studies of this finding. In a study conducted with disabling headache patients, there was significant quality of life increase after cognitive-behavioral treatment (Martin et al., 2015; Nash et al., 2004). The possible mechanism under the current finding will be explained in the next section.

4.5.2 Related-Sample Wilcoxon Signed-Rank Test for Emotional Expression

Regarding emotional expression, related-sample Wilcoxon signed-rank test was conducted to examine the median differences between pre- and post-test in terms of emotional expression types (i.e., passive aggression, solitude/negative behavior, apology). According to the findings, there was a significant difference between pre-intervention and post-intervention tests in terms of passive aggression. In other words, group psychotherapy led to a decrease in the level of passive aggression of the 8 migraine patients out of 9 who participated in the current study.

There were many studies using emotional expression intervention in a written format (WED). Generally, they found that the other types of interventions (i.e., relaxation training) were more effective than WED interventions (Slavin-Spenny et al., 2013) Therefore, studies suggested further research about emotional activation such as

experiencing expression and processing the emotion (Slavin-Spenny et al., 2013). This study may provide valuable findings to fulfill the needs of the literature in terms of emotional expression intervention for migraine patients.

The significant moderator effect of passive aggression on the relation between personality traits and quality of life of migraine patients was stated in Study 2. Using passive aggression clearly affected quality of life of migraine patients in a negative way. Hence, reduction in passive aggression level of the participants might have played an important role in increasing one dimension of quality of life (i.e., RFR) of the patients. However, (Lieberman & Goldstein, 2006) showed that expressing negative emotions too much was related to higher quality of life in chronically ill patients, which is partly inconsistent with the current finding. Because, in Study 2, expressing anger as passive aggression was related to lower level of quality of life. This inconsistency may be originated by the reason that previous studies did not focus on the expression types. However, the present study emphasized the importance of the way the emotions are expressed as well as the emotional expression. Especially the passive aggressive form of expression was negatively associated with RFR (quality of life). To sum up, when emotional expression type was indirect and destructive, excessive expression might not be beneficial. In sum, this finding demonstrated that type of expression is important as well as the expression itself.

4.5.3 Strengths of the Study

The most outstanding strength of the study was that it included an intervention. As previously stated, migraine is defined as “a decapitating chronic condition with unpredictable, episodic, painful, throbbing headaches” (Martin et al., 2000, p. 204) and a lot of material and immaterial resources are being spent for the treatment of it. For this reason, in the United States and in many other countries, insurance companies have been trying to find cost-effective therapies for migraine but studies have not been satisfactory with respect to quality and quantity so far (Brown et al.,

2008; Dahlof & Solomon, 1998). The present study provides valuable preliminary information in this aspect.

Another important contribution of this study was underlying the idea that emotional expression was one of the key elements of migraine treatment. Specifically, psychotherapies involving expression of negative emotions were proven to be useful for improving the quality of life of the patients (Lieberman & Goldstein, 2006).

The nature of the intervention was the other strength of this study. Group psychotherapy was quite useful for the migraine patients in enabling them to share their experiences about migraine and normalization. Normalization of the symptoms and restorative emotional experience are the most effective methods in group therapies (Yalom, 2002). Furthermore, in chronic illnesses, therapies increasing the communication, group therapies and family-based therapies were more effective than patient-centered therapies (Beutler et al., 1988).

Moreover, there were not enough research regarding psychotherapies of migraine, while the other chronic conditions were getting more attention. This study is undertaken the role of pioneering the further research about the treatment of migraine especially in Turkey.

The findings of this study might be used for migraine primary and secondary prevention programs. For example, genetically predisposed people may be taught how to understand, process and express their emotions in order to prevent a possible future migraine condition. Further studies are needed for the prevention programs.

4.5.4 Limitations and Suggestions for the Further Studies

Role-function restriction was the only dimension of migraine specific quality of life as an outcome variable that showed improvement in the current study. There were two other dimension of quality of life which were emotional function and role-unction prevention. The reason why role-function prevention did not reveal any

improvement that participants may perceive this dimension's questions quite preventive. They may perceive that their life was not affected by migraine that much. Moreover, the reason why emotional function did not show any improvement may related to the inadequacy of group therapy session numbers. Emotional function assesses the emotional impact that migraine creates, therefore, improvement in an emotional dimension needed more time in therapy. To examine the detailed reasons of why other dimensions (role-function preventive and emotional function) did not show any improvement, further research is needed.

Passive aggression was the prominent expression type of the current study. As consistent with the findings of Study 2, passive aggression was the most important predictor for migraine patients' quality of life. However, detailed research is needed for the other types of expressions.

For future implications, personality traits might be considered for the therapy. In group therapy personality characteristics and its effects to migraine might be included as a subject. In addition, nueroticsm is one of the personality traits that related to migraine (Cao, Zhang, Wang, Wang, & Wang, 2002 as cited in Luconi et al., 2007; Merikangas, Stevens, & Angst, 1993). Therefore, for the further research, migraine patients with neuroticsm might be choosen as a sample and they might be compared with migraine patients with other personality traits and non-migraine participants.

Another limitation might be the sample selection. Participants were not selected according to their emotional expression scores. There were two criteria for sample selection, being a migraine patient and being married or having romantic relationship. In addition, high education level of the sample might be another limitation. Participant with high education might adhere to therapy more than lower level education people. Therefore, this study might be repeated with other level educated participants in the future studies in order to show the realibility of the study.

One of the main purposes of the current study was to improve the romantic relationship satisfaction by increasing the quantity and quality of emotional expression. However, because of not meeting the assumptions, Wilcoxon signed-rank test was not conducted for relationship satisfaction. Therefore, relationship satisfaction may be the focus of the further studies with bigger sample sizes.

Sample size might also be another limitation. Although, this study was planned with 20 participants and two groups, only 12 participants replied the invitation and 9 of them participated in all the sessions of group therapy. Increasing participant number is recommended for further studies.

CHAPTER 5

GENERAL CONCLUSION

Present dissertation constituted of three studies. Firstly, in Study 1, a migraine specific quality of life questionnaire (MSQ Version 2.1) translated and adapted in Turkish language to fulfill the needs of the second and third studies of the current dissertation. Another purpose of adaptation the MSQ (Version 2.1) was to contribute to migraine literature in Turkey. To the best of my knowledge, before this dissertation, there was no other Turkish quality of life (QOL) questionnaire developed specifically for migraine patients. Psychometric properties of MSQ (Version 2.1) was quite satisfactory. Therefore, quality of life of the participants was measured with MSQ in Study 2 and 3.

In the second study, the moderating role of emotional expression on the association of personality traits with quality of life and romantic relationship satisfaction were examined. The aim of this study was to figure out which type of emotional expression had an influence on quality of life and romantic relationship satisfaction of the migraine patients in its relation to their personality. The main purpose beneath conducting this study was to find out a consisted emotional mechanism related with personality of migraine patients and their life and relationship quality. It was aimed to propose a valuable clinical intervention with the help of the results of Study 2.

In line with my expectations, a consistent emotional mechanism was figured out. According to the results, passive aggression moderated the relation between agreeableness and extraversion personality characteristics and quality of life. In other words, quality of life of agreeable and extravert migraine patients were negatively affected by passive aggression. Agreeableness and extraversion consist of positive, social, and active characteristics and they were not associated with psychological

disorder or physical illnesses (Kotov et al., 2010). However, it was found in Study 2 that their migraine specific quality of life changed negatively if they used passive aggression type of anger expression. This provide a valuable information for including passive aggression to migraine patient's treatment as explained in Study 3.

Study 3 was designed in the light of the findings of Study 2. An emotional expression group psychotherapy was designed for migraine patients. It included both interaction of migraine patients and psychoeducation. Elements of emotional expression including recognition, acceptance, giving meaning, and constructively expressing the negative emotions were taught to participants. Moreover, participants were encouraged to share their experience about migraine and emotions that migraine creates. Before and after the intervention, quality of life, emotional expression, and relationship satisfaction measurements were administered. According to the results, quality of life of the participants increased after intervention. In addition to this, passive aggression of the participants decreased after the intervention. An inference can be easily made that when passive aggression decreased, the quality of life of the patients increased consistent with the findings of Study 2.

To conclude, an emotional mechanism was figured out with the help of Study 2 and with these findings, an intervention was designed and applied. Study 3 proved the effectiveness of the intervention.

The present dissertation from the beginning to the end was a comprehensive project. Each study was complementary for the other. After this study, this kind of interventions may be widespread for this kind of "psychosomatic" disorders. So far, direct emotional expression training has not been applied to migraine patients. Therefore, the findings of this research may be useful for health services in Turkey.

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APENDICES

APPENDIX A: INFORMED CONSENT FORM

Bu çalışma, Orta Doğu Teknik Üniversitesi Klinik Psikoloji doktora öğrencisi Pınar Kaya tarafından Doç. Dr. Özlem Bozo danışmanlığında yürütülen bir çalışmadır. Çalışmanın amacı, migren hastalarının olumsuz duygu ifadelerinin yaşam kalitelerini ve evlilik/ilişki doyumlarını nasıl etkilediğini incelemektir. Bu çalışmaya katılım gönüllülük esasına dayanmaktadır. Cevaplarınız tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır. Çalışmanın ikinci kısmına davet edebilmek için sizden bir iletişim adresi istenecektir fakat bu bilgiler anket sorularından ayrı tutulacak ve böylelikle bilgilerinizin gizliliği sağlanmış olacaktır. Anket, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz. Böyle bir durumda anketi uygulayan kişiye, anketi tamamlamadığınızı söylemek yeterli olacaktır. Anket sonunda, bu çalışmayla ilgili sorularınız olursa e-posta yoluyla sorabilirsiniz. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Psikoloji Bölümü doktora öğrencisi Uzm. Psk. Pınar Kaya (e-posta: pinar.kaya@metu.edu.tr) ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Tarih İMZA

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APPENDIX B: DEMOGRAPHIC INFORMATION FORM

Yaşınız:

Cinsiyetiniz: Kadın ☐ Erkek ☐

Eğitim durumunuz:

☐ Okur yazar

☐ İlkokul

☐ Ortaokul

☐ Lise

☐ Üniversite

☐ Lisansüstü

Gelir durumunuz:

☐ Düşük

☐ Orta

☐ Yüksek

Yaşamınızın çoğunu geçirdiğiniz yer:

☒Köy

☐Kasaba

☐İlçe

☐ İl

☐ Metropol (İstanbul, Ankara gibi)

Yaşadığınız şehir:

……

İlişki durumunuz:

☐ En az 6 aydır evli

☐ En az 6 aydır ilişkisi var

Migren tanısını ne zaman aldınız?

(Ör: 2 yıl önce, 3 ay önce vb.)

……..

Son 3 ay içerisinde kaç gün baş ağrınız oldu? (Ağrı 1 günden fazla sürdüyse, ağrınız olan her günü sayınız)

…….

0'dan 10'a değerlendirilecek olursa, ortalama olarak baş ağrılarınız ne kadar şiddetliydi? (1= hiç ağrı yok, 10= olabilecek en kötü ağrı)

1.Hiç ağrı yok	2	3	4	5	6	7	8	9	10.Olabilecek en kötü ağrı
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Son 3 ayda yaşadığınız migren ataklarınız ortalama olarak ne kadar sürdü? (Lütfen saat olarak yazınız)

……

Ataklarınızın ne kadar kontrol edilebilir olduğunu düşünüyorsunuz?
(1= Hiç kontrol edilebilir değil, 10= Tamamen kontrol edilebilir)

1.Hiç kontrol edilebil	2	3	4	5	6	7	8	9	10.Tamam en kontrol edilebilir
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Başka herhangi bir fiziksel hastalığınız var mı? (Varsa yazınız)

……...

Herhangi bir psikolojik rahatsızlığınız var mı? (Varsa yazınız)

……

APPENDIX C: MIGRAINE SPESIFIC QUALITY OF LIFE QUESTIONAIRE (VERSION 2.1)

MİGRENE ÖZEL YAŞAM KALİTESİ ÖLÇEĞİ (SÜRÜM 2.1)

Migrene Özel Yaşam Kalitesi Ölçeği için örnek sorular şağıda verilmiştir. Bilgi için pinarkaya28@gmail.com **adresine mail atabilirsiniz.**

Aşağıdaki soruları lütfen son ***4 hafta*** içerisinde geçirmiş olduğunuz ***tüm migren ataklarını*** düşünerek yanıtlayınız.

1. Son 4 hafta içerisinde, migren ailenizle, arkadaşlarınızla ve diğer yakınlarınızla ilgilenmenizi hangi sıklıkta engelledi? (Sadece bir şıkkı işaretleyiniz)

1❑ Hiçbir zaman
2❑ Nadiren
3❑ Bazen
4❑ Sıklıkla
5❑ Çoğu zaman
6❑ Her zaman

10. Son 4 hafta içerisinde, migren belirtileriyle baş edebilmek için çalışmayı ya da günlük aktivitelerinizi yapmayı hangi sıklıkta bırakmak zorunda kaldınız? (Sadece bir şıkkı işaretleyiniz)

1❑ Hiçbir zaman
2❑ Nadiren
3❑ Bazen
4❑ Sıklıkla
5❑ Çoğu zaman
6❑ Her zaman

APPENDIX D: THE MOS 36 ITEM SHORT FORM HEALTH SURVEY (SF 36)

1. Genel sağlığınızı nasıl değerlendirirsiniz? Bir tanesini yuvarlak içine alınız

Mükemmel	1
Çok iyi	2
İyi	3
Orta	4
Kötü	5

2. Geçen yıl ile karşılaştırıldığında, sağlığınızı şu an için nasıldeğerlendirirsiniz? Bir tanesini yuvarlak içine alınız

1 yıl öncesine göre çok daha iyi	1
1 yıl öncesine göre biraz daha iyi	2
1 yıl öncesiyle hemen hemen aynı	3
1 yıl öncesine göre daha kötü	4
1 yıl öncesine göre çok daha kötü	5

3. Aşağıdakiler gün boyunca yaptığınız etkinliklerle ilgilidir. Sağlığınız bunları kısıtlıyor mu? Kısıtlıyorsa ne kadar? (Kutulara X işareti koyarak belirtiniz)

	Evet, oldukça kısıtlıyor	Evet, biraz kısıtlıyor	Hayır, hiç kısıtlamıyor
Koşmak, ağır kaldırmak, ağır spor gibi ağır etkinlikler			
Bir masayı çekmek, elektrik süpürgesini itmek ve ağır olmayan sporları yapmak gibi orta derece etkinlikler			
Günlük alışverişte alınanları kaldırma ve taşıma			
Merdivenle çok sayıda kat çıkma			
Merdivenle bir kat çıkma			
Eğilme veya diz çökme			
1-2 km yürüme			
Bir kaç sokak öteye yürüme			
Bir sokak öteye yürüme			
Kendi kendine banyo yapma veya giyinme			

4. Son 4 hafta boyunca bedensel sağlığınızın sonucu olarak, işiniz ya da günlük etkinliklerinizde aşağıdaki sorunlarla karşılaştınız mı?

	Evet	Hayır
a. İş veya diğer etkinlikler için harcadığınız zamanı azalttınız mı ?	1	2
b. Hedeflediğinizden daha azını mı başardınız?	1	2
c. İş veya diğer etkinliklerinizde kısıtlanma oldu mu?	1	2
d. İş veya diğer etkinlikleri yaparken güçlük çektiniz mi?	1	2

5. Son bir ay içinde duygusal sorunlarınızın sonucu olarak işiniz veya diğer günlük etkinliklerinizde aşağıdaki sorunlarla karşılaştınız mı?

	Evet	Hayır
a. İş veya diğer etkinlikler için harcadığınız zamanı azalttınız mı?	1	2
b. Hedeflediğinizden daha azını mı başardınız?	1	2
c. İş veya diğer etkinliklerinizi her zamanki kadar dikkatli yapamıyor muydunuz?	1	2

6. Son bir ay içinde bedensel sağlığınız ya da duygusal sorunlarınız arkadaşlarınızla veya komşularınızla olan etkinliklerinizi ne kadar etkiledi?

Hiç etkilemedi	1
Çok az etkiledi	2
Orta derecede etkiledi	3
Oldukça etkiledi	4
Aşırı etkiledi	5

7. Son bir ay içinde ne kadar ağrınız oldu?

Hiç	1
Çok hafif	2
Hafif	3
Orta	4
Şiddetli	5
Çok şiddetli	6

8. Son bir ay içinde ağrınız işinizi ne kadar etkiledi?

Hiç etkilemedi	1
Çok az etkiledi	2
Orta derecede etkiledi	3
Oldukça etkiledi	4
Aşırı etkiledi	5

9. Aşağıdaki sorular son bir ay içinde neler hissettiğinizle ilgilidir. Her soru için duygularınızı en iyi karşılayan yanıtı seçin. (X işareti koyarak belirtiniz)

.

	Her zaman	Çoğu zaman	Oldukça	Bazen	Nadiren	Hiçbir zaman
Kendinizi yaşam dolu hissettiniz mi?						
Çok sinirli bir insan oldunuz mu?						
Sizi hiçbir şeyin neşelendiremeyeceği kadar kendinizi üzgün hissettiniz mi?						
Kendinizi sakin ve olumlu hissettiniz mi?						
Kendinizi enerjik hissettiniz mi?						
Kendinizi kederli ve hüzünlü hissettiniz mi?						
Kendinizi tükenmiş hissettiniz mi?						
Kendinizi mutlu hissettiniz mi?						
Kendinizi yorgun hissettiniz mi?						

10. Son 4 hafta boyunca bedensel sağlığınız ve duygusal sorunlarınız sosyal etkinliklerinizi ne sıklıkla etkiledi? (Akraba ve arkadaş ziyareti gibi)

Her zaman 1
Çoğu zaman 2
Bazen 3
Nadiren 4
Hiçbir zaman 5

11. Aşağıdaki her bir ifade sizin için ne kadar doğru veya yanlıştır?

	Kesinlikle	Çoğunlukla	Bilmiyorum	Nadiren	Asla
Diğer insanlardan daha kolay hastalanıyor gibiyim.					
Diğer insanlar kadar sağlıklıyım.					
Sağlığımın kötüye gideceğini düşünüyorum.					
Sağlığım mükemmel.					

APPENDIX E: POSITIVE AND NEGATIVE AFFECT SCHEDULE (PANAS)

Bu ölçek farklı duyguları tanımlayan bir takım sözcükler içermektedir. Geçtiğimiz hafta nasıl hissettiğinizi düşünüp her maddeyi okuyun. Uygun cevabı her maddenin yanına ayrılan yere puanları daire içine alarak işaretleyin. Cevaplarınızı verirken aşağıdaki puanları kullanın.

1. Çok az veya hiç
2. Biraz
3. Ortalama
4. Oldukça
5. Çok fazla

1) ilgili	1…… 2……. 3……. 4……. 5…….
2) sıkıntılı	1…… 2……. 3……. 4……. 5…….
3) heyecanlı	1…… 2……. 3……. 4……. 5…….
4) mutsuz	1…… 2……. 3……. 4……. 5…….
5) güçlü	1…… 2……. 3……. 4……. 5…….
6) suçlu	1…… 2……. 3……. 4……. 5…….
7) ürkmüş	1…… 2……. 3……. 4……. 5…….
8) düşmanca	1…… 2……. 3……. 4……. 5…….
9) hevesli	1…… 2……. 3……. 4……. 5…….
10) gururlu	1…… 2……. 3……. 4……. 5…….
11) asabi	1…… 2……. 3……. 4……. 5…….
12) uyanık (dikkati açık)	1…… 2……. 3……. 4……. 5…….
13) utanmiş	1…… 2……. 3……. 4……. 5…….
14) ilhamli (yaratıcı düşüncelerle dolu)	1…… 2……. 3……. 4……. 5…….
15) sinirli	1…… 2……. 3……. 4……. 5…….
16) kararlı	1…… 2……. 3……. 4……. 5…….
17) dikkatli	1…… 2……. 3……. 4……. 5…….
18) tedirgin	1…… 2……. 3……. 4……. 5…….
19) aktif	1…… 2……. 3……. 4……. 5…….
20) korkmuş	1…… 2……. 3……. 4……. 5…….

APPENDIX F: ANGER EXPRESSION SCALE

Herkesin eşine/sevgilisine kızdığı ve/veya öfkelendiği zamanlar vardır. Lütfen son altı ay içinde eşinize/sevgilinize karşı kızgın veya öfkeli hissettiğiniz anları düşününüz. Aşağıda eşlerin/sevgililerin bu duygularla baş etmek için kullandıkları çeşitli yollar listelenmiştir. Lütfen her bir maddeyi dikkatlice okuduktan sonra, sizin duygu ve düşünlerinizi yansıtan en uygun rakamı daire içine alınız. Burada belirtilen baş etme yollarının hepsi sizin evliliğiniz/ilişkiniz için geçerli olmayabilir. Yine de ilişkinizi düşünerek en yakın olabilecek duruma göre görüşünüzü belirtiniz. Her bir maddeyi, başına aşağıda yazan "**Son altı ay içinde ne zaman eşime/sevgilime kızgın veya öfkeli olsam**;…" cümlesini ekleyerek okuyunuz.

SON ALTI AY İÇİNDE NE ZAMAN EŞİME/SEVGİLİME KIZGIN VEYA ÖFKELİ OLSAM; ..... **1--------2--------3------4------5-----6-------7** **Hiçbir zaman Bazen Her zaman**	**Hiçbir zaman**			**Bazen**			**Her zaman/Sürekli olarak**
1. Olaya bir de eşimin/sevgilimin gözünden bakmaya çalışırım.	1	2	3	4	5	6	7
2. Eşime/sevgilime karşı sesimi yükseltirim.	1	2	3	4	5	6	7
3. Hiç yüz vermeyerek sessiz ve soğuk	1	2	3	4	5	6	7
4. Kızgınlığımı ve öfkemi eşimden/sevgilimden saklarım.	1	2	3	4	5	6	7
5. Eşimi/sevgilimi eleştiririm.	1	2	3	4	5	6	7
6. Sorunlarımızı eşimle/sevgilimle tartışırım.	1	2	3	4	5	6	7
7. Tepkimi her fırsatta imalı olarak gösteririm.	1	2	3	4	5	6	7
8. Kızgın olduğum halde, eşime/sevgilime kızgın olmadığımı söylerim.	1	2	3	4	5	6	7
9. Öfke ve kızgınlığımı kendime saklarım.	1	2	3	4	5	6	7
10. Eşime/sevgilime haklı olduğumu kanıtlamaya çalışırım.	1	2	3	4	5	6	7
11. Adil olmaya çalışırım.	1	2	3	4	5	6	7
12. Eşime/sevgilime yüz vermem.	1	2	3	4	5	6	7
13. Ağır sözlerle saldırırım.	1	2	3	4	5	6	7

	Hiçbir zaman						**Her zaman/ Sürekli olarak**
14. Duygularımı sakince eşimle/sevgilimle paylaşırım.	1	2	3	4	5	6	7
15. Kızgın bir şekilde ortamdan veya durumdan uzaklaşırım.	1	2	3	4	5	6	7
16. Eşime/sevgilime kendini kötü hissettirmeye çalışırım.	1	2	3	4	5	6	7
17. Anlaşmaya/uzlaşmaya çalışırım.	1	2	3	4	5	6	7
18. Yumruğumu sıkarak veya kapıları çarparak kızgınlığımı gösteririm.	1	2	3	4	5	6	7
19. Kızgın hissettiğimi inkâr ederim.	1	2	3	4	5	6	7
20. Problemi çözmeye/durumu düzeltmeye çalışırım.	1	2	3	4	5	6	7
21. Evdeki eşyaları vurup kırarım.	1	2	3	4	5	6	7
22. Eşimin/sevgilimin çok üstüne gitmem, büyütmemek için alttan alırım.	1	2	3	4	5	6	7
23. Eşime/sevgilime küserim, bir süre sessiz kalırım.	1	2	3	4	5	6	7
24. Öfkemi kaçarak kontrol ederim (evden çıkarım ya da balkona çıkarım)	1	2	3	4	5	6	7
25. Kendi içime atarım/kapanırım, kendi içimde halletmeye çalışırım.	1	2	3	4	5	6	7
26. Sinirim geçip sakinleştikten sonra eşimle/sevgilimle mutlaka konuşurum.	1	2	3	4	5	6	7
27. Kızgınlığımı tavırlarımla, hareketlerimle, yüzümle belli ederim.	1	2	3	4	5	6	7
28. Somurturum, surat asarım.	1	2	3	4	5	6	7
29. Eşimle/sevgilimle pek kavga etmem, geri çekilirim, çatışmadan kaçınırım.	1	2	3	4	5	6	7
30. Kontrolümü kaybederim, fevri ve sinirli çıkışlarda bulunurum.	1	2	3	4	5	6	7
31. Tartışmayı uzatırım.	1	2	3	4	5	6	7
32. Hakaret ederim.	1	2	3	4	5	6	7
33. Çok fazla umursamam/aldırış etmem, yok sayarım.	1	2	3	4	5	6	7
34. Olaya iki taraflı, onun gözünden de bakmaya, anlamaya çalışırım, kendimde de suç ararım.	1	2	3	4	5	6	7

	Hiçbir zaman						**Her zaman/ Sürekli olarak**
35. Onu sinir etmek için zaaflarının üzerine giderim, tahrik edici davranırım.	1	2	3	4	5	6	7
36. Onu geçiştiririm, terslerim.	1	2	3	4	5	6	7
37. Sinirli olduğumu ya da rahatsız olduğum şeyi eşime/sevgilime belli etmem.	1	2	3	4	5	6	7
38. Üste çıkmaya çalışırım.	1	2	3	4	5	6	7
39. Sonradan düşündüğümde kendimi kızmakta haklı mıyım diye sorgularım ve gerekirse eşime/sevgilime bunu da ifade ederim.	1	2	3	4	5	6	7
40. Başka bir odaya geçer, yalnız kalmak isterim.	1	2	3	4	5	6	7
41. İletişim kurmam, muhatap olmam, hiçbir şeyiyle ilgilenmem.	1	2	3	4	5	6	7
42. Eşimi/sevgilimi suçlarım.	1	2	3	4	5	6	7
43. Ciddi olarak düşünmediğim şeyleri sırf onu üzmek, canını acıtmak için söyleyebilirim.	1	2	3	4	5	6	7
44. Onu görmezden gelirim, göz teması bile kurmam.	1	2	3	4	5	6	7
45. Sorun hakkında konuşmayı ertelerim ya da konuyu kapatmaya çalışırım.	1	2	3	4	5	6	7
46. Dilim hiç durmaz, sürekli laf sokarım, söylenirim.	1	2	3	4	5	6	7
47. Hiç tepki vermem, kendimi savunmam.	1	2	3	4	5	6	7
48. İçimden sıcak davranmak gelmez, içimin soğumasını beklerim.	1	2	3	4	5	6	7
49. Sinirlendiğimde cezasını vermek isterim.	1	2	3	4	5	6	7
50. Daha mesafeli davranırım.	1	2	3	4	5	6	7
51. Özellikle onu kıracak şeyler yaparım.	1	2	3	4	5	6	7
52. Onu dinlermiş gibi yaparak aslında kendime yoğunlaşırım.	1	2	3	4	5	6	7

APPENDIX G: SADNESS EXPRESSION SCALE

Bu anketteki maddeler daha çok ilişkilerde hissedilen üzüntü ve bunalım üzerinedir. Lütfen **son altı ay içinde** eşinizle/sevgilinizle tartıştıktan sonra kendinizi üzgün veya bunalımda hissettiğiniz anları düşününüz. Bu üzüntünüzü veya bunalımınızı eşinize/sevgilinize nasıl yansıttığınızı dikkate alarak aşağıdaki sorulara cevap veriniz. Lütfen cevaplarınızı mümkün olduğu kadar eşinizle/sevgilinizle olan ilişkinizde yaşadığınız üzüntü ve bunalımlı anları göz önüne alarak cevaplandırınız. Her bir maddeyi, başına aşağıda yazan **"Son altı ay içinde eşimle/sevgilimle tartıştıktan sonra kendimi ne zaman üzgün veya bunalımda hissetsem;...."** cümlesini ekleyerek okuyunuz.

SON ALTI AY İÇİNDE EŞİMLE /SEVGİLİMLE TARTIŞTIKTAN SONRA KENDİMİ NE ZAMAN ÜZGÜN VE BUNALIMDA HİSSETSEM;..... **1-------2-------3------4--------5--------6---------7** **Hiçbir zaman Bazen Her zaman/ Sürekli olarak**	**Hiçbir zaman**			**Bazen**			**Her zaman/ Sürekli olarak**
1. Yapmayı sevdiğim şeylerle meşgul olurum.	1	2	3	4	5	6	7
2. Eşimden/sevgilimden teselli ararım.	1	2	3	4	5	6	7
3. Tek başıma vakit geçiririm.	1	2	3	4	5	6	7
4. Ruh halimi değiştirmek için neşelenmeye çalışırım.	1	2	3	4	5	6	7
5. İşimi (veya okulumu) veya ev işlerini asmaya başlarım.	1	2	3	4	5	6	7
6. İnsanlardan uzaklaşırım.	1	2	3	4	5	6	7
7. Kendi başıma kalmak isterim.	1	2	3	4	5	6	7
8. Keyifli bir şeyler yapmayı planlarım.	1	2	3	4	5	6	7
9. Eşimle/sevgilimle daha fazla zaman geçiririm.	1	2	3	4	5	6	7
10. Yataktan çıkmak istemem ya da evde bir şey yapmadan vakit geçiririm.	1	2	3	4	5	6	7
11. Eşimden/sevgilimden destek isterim.	1	2	3	4	5	6	7
12.Eşimin/sevgilimin bana yardım etmesini beklerim.	1	2	3	4	5	6	7

	Hiçbir zaman			**Bazen**			**Her zaman/ Sürekli olarak**
13. Durumu atlatmak için eşime/sevgilime adeta yapışırım.	1	2	3	4	5	6	7
14. Eğlenceli ya da ilgi çekici bir faaliyete girişirim.	1	2	3	4	5	6	7
15. Evin içinde pek bir şey yapmadan oyalanırım.	1	2	3	4	5	6	7
16. Eşimle iyi zaman geçiririm.	1	2	3	4	5	6	7
17. Sorunlarımı unutmaya çalışır, mutluymuş gibi davranırım.	1	2	3	4	5	6	7
18. Sorunlarımdan uzaklaşmak için başka şeyler yapmaya çalışırım.	1	2	3	4	5	6	7
19. Diğer insanlardan uzak dururum.	1	2	3	4	5	6	7
20. Günlük yaşamıma devam etmekte zorlanırım.	1	2	3	4	5	6	7
21. Yardım için eşimin/sevgilimin desteğini ararım.	1	2	3	4	5	6	7
22. Sıkıntılı zamanlarımızda eşimin/sevgilimin beni anlayacağına güvenirim.	1	2	3	4	5	6	7
23. Eğlenceli bir şeyler yaparım.	1	2	3	4	5	6	7
24. Bana yardım etmesi için eşimin/sevgilimin dikkatini çekmeye çalışırım.	1	2	3	4	5	6	7
25. Sorunlarımı eşimle/sevgilimle paylaşırım.	1	2	3	4	5	6	7
26. Kafamı dağıtmak için bir şeyler yaparım.	1	2	3	4	5	6	7
27. Hasta olduğumu, başımın ağrıdığını vs. söyleyerek benimle ilgilenmesini beklerim.	1	2	3	4	5	6	7
28. Daha çok işimle ya da evimle ilgilenirim, kendimi tamamen bunlara veririm.	1	2	3	4	5	6	7
29. Nazlı olurum, naz yaparım.	1	2	3	4	5	6	7
30. Onu suçlayıcı davranırım.	1	2	3	4	5	6	7
31. Ses tonumla belli ederim, sitemkâr konuşurum.	1	2	3	4	5	6	7
32. Üstünden biraz zaman geçtikten sonra ona beni üzen şeyi anlatırım.	1	2	3	4	5	6	7
33. Ne yaparsa yapsın kabul etmem, olayı uzatırım.	1	2	3	4	5	6	7
34. Uyurum ya da TV izlerim.	1	2	3	4	5	6	7
35. Kendi kendime tamir etmek, halletmek isterim.	1	2	3	4	5	6	7
36. Kendi içime dönerim/kapanırım.	1	2	3	4	5	6	7

	Hiçbir zaman			**Bazen**			**Her zaman /Sürekli olarak**
37. Kendimi dışarı atarım.	1	2	3	4	5	6	7
38. Onu ve/veya durumu umursamam.	1	2	3	4	5	6	7
39. Ondan uzaklaşırım, olayları zamana bırakırım (kaçınırım).	1	2	3	4	5	6	7
40. Hiçbir şey yokmuş gibi davranırım, duygularımı bastırıp kayıtsız davranırım.	1	2	3	4	5	6	7
41. Hiçbir şey yapmak, paylaşmak istemem.	1	2	3	4	5	6	7
42. Birkaç gün onu görmezden gelirim.	1	2	3	4	5	6	7
43. Zamana ihtiyacım olur, önce kendi içimde sindirmem gerekir.	1	2	3	4	5	6	7
44. Hasta oluyor gibi olurum. Örneğin, başım ağrır, belim tutulur.	1	2	3	4	5	6	7
45. Kolay kolay açılamam, doğrudan söyleyemem.	1	2	3	4	5	6	7
46. Ona kasten kötü davranırım.	1	2	3	4	5	6	7
47. Bu duygumu, üzüntümü ona belli etmem.	1	2	3	4	5	6	7
48. Onun dikkatini çekecek şeyler yaparım, dikkatini çekmeye çalışırım.	1	2	3	4	5	6	7
49. Ona soğuk davranırım.	1	2	3	4	5	6	7
50. Herhangi bir tepki vermem, bunun bir çözümü yoktur.	1	2	3	4	5	6	7
51. Ona söylemem ama onun anlamasına beklerim.	1	2	3	4	5	6	7
52. Onunla iletişim kurmaya çalışırım.	1	2	3	4	5	6	7
53. Benimle ilgilenmesini beklerim.	1	2	3	4	5	6	7

APPENDIX H: GUILT EXPRESSION SCALE

Evlilikte eşlerin/sevgililerin birbirlerine söyledikleri sözler veya yaptığı, yapamadığı şeyler yüzünden suçlu hissettikleri anlar vardır. **Örneğin**, bir kişi eşinin/sevgilisinin özel bir gününü unuttuğunda ya da kaba, gereksiz, yersiz bir söz söylediğinde veya eşinin/sevgilisinin kıskanmasına yol açacak bir hareket yaptığında kendini suçlu hissedebilir. Lütfen **son altı ay içinde** yukarıdaki şekilde eşinizle/sevgilinizle ilişkinizde söylemiş bulunduğunuz, yaptığınız veya yapamadığınız herhangi bir şey için suçlu hissettiğiniz olayları aklınıza getiriniz. Daha sonra suçlu hissettiğiniz bu durumlarda aşağıdaki davranışları ne ölçüde yaptığınızı, 1=Hiçbir zaman ve 7=Her zaman/Sürekli olarak aralığını kullanarak işaretleyiniz. Her bir maddeyi, başına aşağıda yazan **"Son altı ay içinde ne zaman kendimi eşime/sevgilime söylediğim, yaptığım veya yapamadığım (yapmadığım) şeyler için suçlu hissetsem;...."** cümlesini ekleyerek okuyunuz.

SON ALTI AY İÇİNDE, NE ZAMAN KENDİMİ EŞİME/SEVGİLİME SÖYLEDİĞİM, YAPTIĞIM VEYA YAPAMADIĞIM (YAPMADIĞIM) ŞEYLER İÇİN SUÇLU HİSSETSEM;..... **1--------2-----3------4------5-------6---------7** **Hiçbir zaman Bazen Her zaman/ Sürekli olarak**	**Hiçbir zaman**			**Bazen**			**Her zaman /Sürekli olarak**
1. Özür dilerim.	1	2	3	4	5	6	7
2. Yaptıklarım için bir açıklama getiririm.	1	2	3	4	5	6	7
3. Durumu düzeltmek için bir şeyler yapmaya çalışırım.	1	2	3	4	5	6	7
4. Üzgün olduğumu belirten şeyler söylerim.	1	2	3	4	5	6	7
5. Eşime normalde olduğumdan daha iyi davranırım.	1	2	3	4	5	6	7
6. İlgili konu/durum hakkında eşimle/sevgilimle konuşmaktan kaçınırım.	1	2	3	4	5	6	7
7. Eşime/sevgilime yaptığımdan (ya da yapmadığım şeyden) pişmanlık duyduğumu söylerim.	1	2	3	4	5	6	7
8. Eşime/sevgilime normalden daha fazla sevgi ve ilgi gösteririm.	1	2	3	4	5	6	7
9. Eşim/sevgilim için fazladan bir şeyler yaparım.	1	2	3	4	5	6	7
10. Yaptıklarımın sorumluluğunu kabul ederim/üstlenirim.	1	2	3	4	5	6	7

	Hiçbir zaman			**Bazen**			**Her zaman/ Sürekli olarak**
11. Yüzüme vurur ya da üstüme gelirse önemli bir şey yaptığımı inkâr ederim.	1	2	3	4	5	6	7
12. Eşime/sevgilime yaptığım şeyin nedenlerini/gerekçelerini anlatırım.	1	2	3	4	5	6	7
13. İleride daha iyi bir eş/sevgili olacağıma dair söz veririm	1	2	3	4	5	6	7
14. Öyle davranmamı gerektiren koşulları anlatırım.	1	2	3	4	5	6	7
15. Yaptıklarımı telafi etmeye çalışırım.	1	2	3	4	5	6	7
16. Durumun ciddiyetini azaltmaya/önemsiz göstermeye çalışırım.	1	2	3	4	5	6	7
17. Eşime/sevgilime olayın neden böyle olduğunu açıklarım.	1	2	3	4	5	6	7
18. Olay hakkında konuşmaktan kaçınırım.	1	2	3	4	5	6	7
19. Eşimin/sevgilimin yanında davranışlarıma daha özen gösteririm, dikkat ederim.	1	2	3	4	5	6	7
20. Sessiz kalır ve konu hakkında pek bir şey söylemem.	1	2	3	4	5	6	7
21. Onun da önceden yaptığı hataları hatırlatarak üste çıkmaya çalışırım.	1	2	3	4	5	6	7
22. Telafi etmek için onun hoşuna gidecek, seveceği bir şeyler yaparım (şımartmak, jest yapmak gibi).	1	2	3	4	5	6	7
23. Haksız olduğumu pek kabul etmem, kolay kolay özür dilemem.	1	2	3	4	5	6	7
24. Neyi neden yaptığımı açıklarım.	1	2	3	4	5	6	7
25. Alttan alırım/almaya çalışırım.	1	2	3	4	5	6	7
26. Hatamı kabul etmem, suçsuzmuş gibi üste çıkmaya çalışırım.	1	2	3	4	5	6	7
27. Fiziksel yakınlık kurarım, ona sokulurum.	1	2	3	4	5	6	7
28. Hatalı olduğumu kabul eder, geri adım atarım.	1	2	3	4	5	6	7

	Hiçbir zaman			**Bazen**			**Her zaman/ Sürekli olarak**
29. Hiçbir şey yapmam, tepki vermem, unutur giderim.	1	2	3	4	5	6	7
30. Sarılıp, öperim.	1	2	3	4	5	6	7
31. Konunun üstünü örtmeye çalışır, konuyu Hatırlatacak şeyler yapmamaya çalışırım.	1	2	3	4	5	6	7
32. Hiçbir şey olmamış gibi davranırım.	1	2	3	4	5	6	7
33. Çok öfkeli davranır üstüme gelirse, susarım.	1	2	3	4	5	6	7
34. Gönlünü alacak şeyler yapmaya çalışırım.	1	2	3	4	5	6	7
35. Özeleştiri yaparım ve yaptıklarımın sorumluluğunu üstlenirim.	1	2	3	4	5	6	7

APPENDIX I: BASIC PERSONALITY TRAITS INVENTORY (BPTI)

Aşağıda size uyan ya da uymayan pek çok kişilik özelliği bulunmaktadır. Bu özelliklerden her birinin sizin için ne kadar uygun olduğunu ilgili rakamı daire içine alarak belirtiniz.

Örneğin; Kendimi ..... biri olarak görüyorum.

Hiç uygun değil **Uygun değil** **Kararsızım** **Uygun** **Çok uygun**

1 **2** **3** **4** **5**

		Hiç uygun değil	Uygun değil	Kararsızım	Uygun	Çok uygun			Hiç uygun değil	Uygun değil	Kararsızım	Uygun	Çok uygun
1	Aceleci	1	2	3	4	5	24	Pasif	1	2	3	4	5
2	Yapmacık	1	2	3	4	5	25	Disiplinli	1	2	3	4	5
3	Duyarlı	1	2	3	4	5	26	Açgözlü	1	2	3	4	5
4	Konuşkan	1	2	3	4	5	27	Sinirli	1	2	3	4	5
5	Kendine güvenen	1	2	3	4	5	28	Canayakın	1	2	3	4	5
6	Soğuk	1	2	3	4	5	29	Kızgın	1	2	3	4	5
7	Utangaç	1	2	3	4	5	30	Sabit fikirli	1	2	3	4	5
8	Paylaşımcı	1	2	3	4	5	31	Görgüsüz	1	2	3	4	5
9	Geniş / rahat	1	2	3	4	5	32	Durgun	1	2	3	4	5
10	Cesur	1	2	3	4	5	33	Kaygılı	1	2	3	4	5
11	Agresif(Saldırgan)	1	2	3	4	5	34	Terbiyesiz	1	2	3	4	5
12	Çalışkan	1	2	3	4	5	35	Sabırsız	1	2	3	4	5
13	İçten pazarlıklı	1	2	3	4	5	36	Yaratıcı (Üretken)	1	2	3	4	5
14	Girişken	1	2	3	4	5	37	Kaprisli	1	2	3	4	5

15	İyi niyetli	1	2	3	4	5	38	İçine kapanık	1	2	3	4	5
16	İçten	1	2	3	4	5	39	Çekingen	1	2	3	4	5
17	Kendinden emin	1	2	3	4	5	40	Alıngan	1	2	3	4	5
18	Huysuz	1	2	3	4	5	41	Hoşgörülü	1	2	3	4	5
19	Yardımsever	1	2	3	4	5	42	Düzenli	1	2	3	4	5
20	Kabiliyetli	1	2	3	4	5	43	Titiz	1	2	3	4	5
21	Üşengeç	1	2	3	4	5	44	Tedbirli	1	2	3	4	5
22	Sorumsuz	1	2	3	4	5	45	Azimli	1	2	3	4	5
23	Sevecen	1	2	3	4	5							

APPENDIX J: ROMANTIC RELATIONSHIP SATISFACTION SCALE

Aşağıdaki ifadedeki boşluğa gelecek sıfatı düşüncelerinize ve duygularınıza göre derecelendirerek belirtiniz. Koyacağınız X işareti hangi tarafa yakınsa o sıfatı daha uygun gördüğünüz anlamına gelir.

GENEL OLARAK SEVGİLİMLE _____ BİR İLİŞKİMİZ VAR.

Tutkusuz	___	___	___	___	___	___	___	Tutkulu
Ödüllendirici	___	___	___	___	___	___	___	Cezalandırıcı
Nefret dolu	___	___	___	___	___	___	___	Sevgi dolu
Tatmin edici	___	___	___	___	___	___	___	Tatmin etmeyen
Zevkli	___	___	___	___	___	___	___	Sinir bozucu
Mutlu	___	___	___	___	___	___	___	Mutsuz
İyi	___	___	___	___	___	___	___	Kötü
Heyecanlı	___	___	___	___	___	___	___	Heyecansız
Memnuniyetsiz	___	___	___	___	___	___	___	Memnuniyet verici

"Kapsamlı olarak baktığımda sevgilimle olan ilişkimden memnunum."

1 2 3 4 5 6 7

Tamamen karşıyım Tamamen katılıyorum

APPENDIX K: TURKISH SUMMARY

GİRİŞ

Türkiye kolektif ve geleneksel bir kültüre sahiptir. Geleneksel kültürlerde duyguların ifadesi, özellikle yetişkinler için teşvik edilmemektedir. Bu durumlarda, insanlar duygularını ifade etmenin başka yollarını bulmaktadırlar. Bedensel belirti, duyguları geleneksel kültürlerde ifade etmenin yollarından biridir. Araştırmacılar, geleneksel kültürlerdeki bedensel belirtlerin psikolojik rahatsızlıklardan ayırt edilemeyeceğini belirtmiştir (Angel & Thoits, 1987). Özellikle, Danimarka'daki göçmen kadınlarla yapılan bir araştırmada, katılımcıların yalnızca% 8'inin kendilerini sağlıklı olarak gördüğü, geri kalanının bedensel belirtileri olduğunu belirtilmiştir. Baş ağrısı, bildirilen bedensel belirtilerin% 56'sını oluşturmuştur (Mirdal, 1985). Bedensel belirtiler ya da somatizasyon, bu kültürlerde iletişimin en önemli unsurlarından biri haline gelmiştir (Kirmayer & Young, 1998). Somatizasyonun iletişimin ana faktörü olmasının nedenleri bu çalışmada incelenmeyecektir. Fakat, bu bilgiye dayalı olarak, Türk kültürünün en yaygın bedensel belirtilerinden biri olan migrene odaklanılacaktır. Migren, duygu ifadesinin yerine geçmesi rolü açısından incelenecektir. Migrenin duygu ifadesinin yerine geçmesi altındaki mekanizma incelenecek, ek olarak psikoterapötik bir müdahale programı önerilecek ve uygulanacaktır.

Özetlemek gerekirse, mevcut doktora tezi, duygusal ifadenin düzenleyici rolünün, kişilik özellikleri, yaşam kalitesi (QOL) ve migren hastalarının ilişki doyumu arasındaki ilişkiler üzerindeki etkileri hakkında ayrıntılı bilgi sağlayacaktır. Yukarıda belirtilen çalışmadan elde edilen bilgilere dayanarak, hastalar için bir tedavi programı tasarlanacak ve uygulanacaktır.

Sonuç olarak, mevcut tezin en önemli amacı, Türkiye'deki migren literatürüne ve uygulamasına değerli katkılar sağlamaktır. Geleneksel bir kültürde yaşamak, insanları duygularını bastırmak ya da dolaylı olarak ifade etmeye yönlendirmiş, bu da onların çeşitli bedensel belirtilerden yakınır hale getirir. Dolayısıyla, duyguyu ifade edememe ve bedensel belirtiler oluşturma insanları yüksek derecede etkiliyorsa, bunun için bir çözüm önerilmesi hastalar ve aileleri için yararlı olacaktır.

Mevcut Doktora Tezinin Amaç ve Organizasyonu

Mevcut tezin genel amacı, migreni psikolojik açıdan incelemekti. Bu amaca ulaşmak için üç çalışma yapılmıştır. Bu çalışmaların spesifik amaçları şöyledir: (1) Çalışma 1, Çalışma 2'deki değerlendirme araçlarından biri olarak kullanılabilmesi için Migrene Özgü Yaşam Kalitesi Ölçeğini (Sürüm 1.2) Türkçe'ye uyarlamak için yürütülmüştür, (2) Çalışma 2, migren hastası olan Türkiye vatandaşı evli veya romantik bir ilişkisi olan migren hastalarında, kişilik özellikleri, duygusal ifade, yaşam kalitesi ve ilişkisel doyum arasında ilişkilerin bulunmasını amaçlamıştır. (3) Çalışma 3'ün temel amacı, bir grup psikoterapisinin geliştirilmesi ve uygulanması ve migren hastalarının yaşam kalitesi üzerindeki etkisinin incelenmesi olmuştur.

ÇALIŞMA 1

MİGRENE ÖZGÜ YAŞAM KALİTESİ ÖLÇEĞİNİN UYARLANMASI, GÜVENİLİRLİK VE GEÇERLİK ÇALIŞMASI (SÜRÜM 2.1)

Literatür İncelemesi

Baş ağrısı dünyada çok yaygın bir hastalıktır ve araştırmacıların dikkat çektiği konuların başında gelir. Bu nedenle, kronik baş ağrısı hastalarının yaşam kalitesini ölçen anketler geliştirmek ve uygulamak önemlidir.

Kronik hastaların yaşam kalitesini ölçmek için en yaygın kullanılan anket, Tıbbi Sonuç Çalışması (MOS) Kısa Form Sağlık Araştırması, SF-36 Kısa Form'dur (Solomon, 1997'den akt.). SF-36, Medikal Sonuç Çalışmasının sonuçlarına göre geliştirilmiştir. Öncelikle, 20 maddelik bir versiyon geliştirilmiş, daha sonra 36 maddelik sürüm kullanılmaya başlanmıştır. Her iki versiyon da baş ağrısı da dahil olmak üzere (Solomon, Skobieranda, & Gragg,1993) geniş yelpazedeki kronik hastalıklarda yaşam kalitesini ölçmek için kullanılır (Solomon, 1997). Fakat, SF-36, migreni diğer baş ağrılarından ayırt edememektedir.

Baş ağrısı olanlar dahil olmak üzere kronik hastaların yaşam kalitesini ölçmek için birçok değerlendirme aracı yapılmıştır, fakat yakın zamana kadar, migren hastaları için özel olarak geliştirilmiş bir yaşam kalitesi ölçeği mevcut değildi.

Migrene Özel Yaşam Kalitesi Ölçeği (Sürüm 2.1)

Migren hastalarının yaşam kalitesini daha uzun ancak belirli bir süre, yani 4 hafta boyunca değerlendirmek için Migrene Özgü Yaşam Ölçeği (MSQ) (Sürüm 1.0) geliştirilmiştir. Migrene Özel Yaşam Kalitesi Ölçeği (MÖÖ, Sürüm 1.0), rol kısıtlayıcı (RK), rol önleyici (RÖ) ve duygusal işlevsellik (Dİ) olan üç alana sahiptir

(Jhingran, Davis, LaVange, Miller ve Helms, 1998; Jhingran, Osterhaus, Miller, Lee , & Kirchdoerfer, 1998). MÖÖ (Sürüm 1.0) 'un psikometrik özellikleri tatminkar olmasına rağmen, MÖÖ (Sürüm 2.0) profesyonellerin ve hastaların geri bildirimleri yardımıyla geliştirilmiştir. MÖÖ'nün ikinci sürümünü geliştirmenin birkaç amacı vardır; bunlardan birkaç tanesi, maddelerin belirsizliklerinin azaltılması, ayırt edici ve yakınsak geçerliliğin artırılması ve yanıt kategorilerinin 6 puanlık Likert tipi ölçeğe standardize edilmesidir. Sürüm 2.0'ı geliştirdikten sonra, araştırmacılar orijinal 16 maddeli MÖÖ (Sürüm 2.0) ile karşılaştırıldığında 14 maddeli MÖÖ geliştirilmiş faktör yapısının versiyonunu kabul etmiştir. Böylelikle, 14 maddelik sürümü, araştırmacılar tarafından migren hastalarının uzun süreli (4 hafta) yaşam kalitesini değerlendirmek amacıyla yaygın bir şekilde kullanılmaya başlanmıştır (Martin ve ark., 2000).

Çalışma 1'in Amacı

Yukarıda verilen bilgilere göre, MÖÖ (Sürüm 2.1), migrene özgü yaşam kalitesini ölçmek için önemli bir değerlendirme aracıdır. Bildiğim kadarıyla, özellikle Türk dilinde migren hastalarının yaşam kalitesi üzerindeki uzun dönem etkilerini değerlendiren başka bir anket bulunmamaktadır. Bu nedenle MÖÖ (Sürüm 2.1) 'in Türkçe'ye uyarlanması hem güncel tez çalışması hem de gelecekte Türkiye'de yürütülecek diğer migren araştırmaları için önemli bir role sahiptir. Çalışma 1'in amacı MÖÖ (Sürüm 2.1) 'i Türkçe'ye çevirmek ve faktör yapısını, güvenilirliğini ve geçerliliğini Türkiye'de migren hasta örneklemi kullanarak incelemektir.

Yöntem

Katılımcılar

Bu çalışmanın katılımcıları, en az son 6 ay boyunca evli olma veya romantik ilişkide olma kriterlerini karşılayan 150 migren hastasıdır. Bir katılımcı, anketlerden birine yanıt vermemesi nedeniyle Çalışma 1'den çıkartılmıştır. Çalışma 149 katılımcı ile devam etmiştir. 149 katılımcının 120'si kadın (%80.5), 25'si erkek (% 16.8) ve 4 katılımcı cinsiyetlerini belirtmemiştir (% 2.7).

Sonuçlar ve Tartışma

Bulgularımıza göre, Türkçe versiyonun faktör yapısı orijinal versiyonun faktör yapısına uygun bulunmuştur (Martin ve ark., 2000) ve üç faktör ortaya çıkmıştır.

Alt ölçekler ve toplam ölçek için iç tutarlılık güvenilirliği analizi yapılmıştır. Türkçe versiyonunda RFR, RFP ve EF alt ölçekleri ve toplam ölçek için güvenilirlik puanı kabul edilebilir yükseklikte; ancak, orijinalden biraz daha düşük çıkmıştır (Martin ve ark., 2000). Bu nedenle, toplam puan hesaplaması yapılmaksızın Türkçe versiyonun da alt ölçek puanlarıyla kullanılması önerilmektedir.

Birleşen, ayrışan ve ölçüte dayalı geçerlik olmak üzere üç geçerlik testi yapılmıştır. Birleşen geçerliği test etmek için RFR, RFP ve EF'nin SF 36'nın fiziksel ve zihinsel sağlık alt ölçekleri ile korelasyonları hesaplanmıştır. Elde edilen sonuçlara göre, MSQ'nun üç alt ölçeğinin tümü fiziksel ve zihinsel sağlık ile pozitif yönde ilişkili çıkmıştır. Zihinsel sağlık ile RFR, RFP, EF'nin korelasyon katsayıları orta derecede ve orijinal çalışmayla uyumludur (Martin ve ark., 2000). Bununla birlikte, RFR, RFP ve EF, fiziksel sağlık ile zihinsel sağlıktan daha kuvvetli bir şekilde ilişkili bulunmuştur fakat bu, kısmen orijinal çalışmayla uyuşmamaktadır. Orijinal çalışmada, RFR ve RFP'nin, fiziksel sağlık ile zihinsel sağlıktan daha kuvvetli bir korelasyona sahip olduğu belirtilmiştir. Bununla birlikte, aynı çalışmada EF zihinsel sağlık ile fiziksel sağlığa kıyasla daha güçlü bir korelasyona sahiptir (Martin ve ark., 2000). EF ve zihinsel sağlık arasındaki korelasyonların EF ve fiziksel sağlık arasındaki korelasyona oranla daha düşük olmasının nedeninin, hastaların duygularını inkar etmesi olabileceği düşünülmüştür. Mevcut tez çalışmasının 2 ve 3. çalışma bulgularıyla uyumlu olarak, migren hastalarının duygularını aktif bir şekilde işleyememe eğilimi vardır. 2. ve 3. Çalışmalar migren hastalarının duygularını deneyimlediğini, fakat aktif bir şekilde yüzleşip onları işleyemediğini göstermiştir. Miren hastaları tarafından öfke ifadesi olarak pasif kızgınlığın kullanımı bu eğilime bir örnektir. Bu bulgular, migren hastalarının EF alt ölçeğinin sorularının,

kendilerinin duygularıyla ilgili olmadığını algılayabileceği çıkarımına yardımcı olmaktadır. Örnek vermek gerekirse, aşağıdaki soruyu gördüklerinde, bunu duygusal bir soru değil, sağlıkla ilgili bir soru olarak algılamış olmak olasılıkları vardır: "Son 4 hafta içinde, migreniniz için hangi sıklıkta kendiniz bıkkın ve yılgın hissettiniz?" Bu mevcut bulgu ve literatürün EF ve zihinsel sağlık arasındaki korelasyonlar bakımından tutarsızlığının nedeni olabilir.

Ayrışan geçerlik açısından, RFR, RFP, EF ve PANAS'ın negatif duygu durumu (NA) alt ölçeği arasındaki korelasyon katsayıları hesaplanmıştır. Bulgulara göre NA, RFP ve EF ile anlamlı ve negatif korelasyon göstermiştir. Bu bulgu literatürdeki diğer bulgularla paralellik göstermektedir. Örneğin, bir çalışma, duygusal rahatsızlığın ve migren şiddetinin birbiriyle ilişkili olduğunu bildirmiştir (Pearce, 1977).

Ölçüte dayalı geçerlik ile ilgili olarak, düşük ve yüksek migren şiddeti olan hastalar, RFR, RFP ve EF açısından karşılaştırılmıştır. Sonuçlara göre, yüksek şiddetli migren yaşayan hastaların düşük şiddetli migren yaşayan hastalara oranla RFR, RFP ve EF değerleri daha düşük çıkmıştır. Bu bulgular, literatür ile de uyumluluk göstererek, migrenin daha şiddetli olmasının yaşam kalitesini olumsuz yönde etkilediğini ortaya koymuştur (Leonardi ve ark., 2010; Tkachuk ve ark. 2003).

MSQ'un Türkçe versiyonunun (Sürüm 2.1) kabul edilebilir iç tutarlılık güvenilirliği, birleşen ve ayrışan geçerliği ve ölçüte dayalı geçerliği olduğu kanıtlanmıştır.

ÇALIŞMA 2

KİŞİLİK ÖZELLİKLERİNİN MİGREN HASTALARININ YAŞAM KALİTESİ VE ROMANTİK İLİŞKİ DOYUMU ÜZERİNDEKİ YORDAYICI ETKİSİ: DUYGU İFADESİNİN DÜZENLEYİCİ ROLÜ

Giriş

Migren

Migren, "bulantı, kusma, fotofobi ve fonofobinin eşlik edebildiği, öngörülemeyen, episodik, ağrılı, zonklama tipi bir baş ağrısı olan kronik bir durum" olarak tanımlanmıştır (Martin et al., 2000, p. 204). Migren, vasküler baş ağrılarının en kötüsü olarak bilinir ve migren baş ağrısının vasküler arter daralmasında değişikliğe neden olduğu ve tek taraflı ağrı zonklamasına neden olduğu hipotezi bulunmaktadır (Brannon &Feist, 2004).

Migren, Dünya Sağlık Örgütü (WHO) tarafından yürütülen bir araştırmada, 2010 Dünya Klinik Hastalık Yükü Anketi (GBD 2010) tarafından hem erkek hem de kadınlarda üçüncü yaygın hastalık olarak listelenmiştir. (Steiner, Stovner, & Birbeck, 2013'ten akt. GBD, 2010; Vos ve ark., 2012'den akt. GBD, 2010). Dünya genelinde, yetişkin nüfusun %46'sı genel olarak aktif baş ağrısından; özellikle ise yetişkin nüfusun %11'i migren hastalığından mustariptir. Avrupa ve Amerika'daki araştırmalara göre, her yıl erkeklerin %6-8'si ve kadınların %15-18'inde migren atakları görülmektedir. Bu rakamlar Türkiye'de daha da artmaktadır; Türkiye'de erkeklerin %8,5'i ve kadınların %24,6'sı migren baş ağrısı çekmektedir (Ertas ve ark., 2012). Kadınlar için, migren prevalansı ergenlikten sonra yaklaşık 40 yaşına kadar

yükselir ve daha sonra azalır (Silberstein, 2004). Her iki cinsiyette de prevalans oranları 30-39 yaşları arasında en yüksektir ve 60 yaşından sonra en düşük oranlardadır (Lipton ve ark., 2007).

Yaşam Kalitesi ve Migren

Migren, yaşamı kesintiye uğratan bir baş ağrısı türü olması nedeniyle hastaların yaşam kalitesini incelemek için birçok çalışma yapılmıştır. Genel olarak bu çalışmalar hastaların fiziksel, duygusal ve sosyal işlevleri üzerine odaklanmış (Schrag, 2006) ve migrenin hastaların sağlıkla ilişkili yaşam kalitesini düşürdüğünü ileri sürmüştür (Raggi ve ark., 2011). Örneğin, migren hastalarının yaşamlarındaki zorlukları belirtmeye teşvik edildiği nitel bir çalışmada, sosyal yaşantılarında üç önemli sorunlu alan bildirmişlerdir; iş ve çalışma, aile içindeki ve/veya bir partnerle birlikte olan yaşam ve aile ve çalışma ortamı dışındaki sosyal ilişkiler (Ruiz de Velasco, González, Etxeberria ve Garcia-Monco, 2003).

İlişki Doyumu ve Migren

Migren, hastaların yaşam kalitesini olumsuz yönde etkilediği gibi, yarattığı kısıtlılıklar nedeniyle da ailelerinin yaşamını oldukça olumsuz yönde etkilemektedir. Örneğin nitel bir çalışmada, bir migren hastası yaşamı üzerindeki kısıtlılığın etkilerini şöyle ifade etmiştir; "Her Pazar acı çekiyordum ve bunun eşim için kabus olduğunun farkındaydım" (896, Ruiz de Velasco, González, Etxeberria, ve Garcia-Monco, 2003). Aynı çalışmada, başka bir hasta, aile üyelerinin onlarla birlikte dışarıdaki herhangi bir sosyal faaliyete katılamaması nedeniyle kendisinden nefret ettiklerini belirtmiştir.

Kısaca, migren hastalarının aile işlevleri, ebeveyn rolleri ve partnerleriyle ilişkisi migrenden olumsuz etkilenmektedir. Birçok çalışma ailenin de tedaviye dahil edilmesinin önemini vurgulamıştır (Smith, 1998). Bu nedenle, migren hastalarının ilişki doyumu bu çalışmanın önemli bir odak noktası olacaktır.

Duygu İfadesi ve Migren

Breuer ve Freud (1893) kronik baş ağrısı da dahil olmak üzere bazı psikosomatik semptomlarda oluşan duyguların önemine dikkat çekmiştir. Çalışmalarını histerik belirtilere sahip hastalar üzerinde yoğunlaştırmışlardır. Histerinin nedeninin, hastanın geçmişindeki büyük bir travma ya da çok sayıda küçük travmalar olduğunu etmişlerdir. Geçmişte yaşanan bir olayın neden kişiyi bu kadar etkilediği sorusu, Breuer ve Freud tarafından cevaplanmıştır. Olumsuz bir duygunun etkisini azaltabilmek için bir duygu açığa çıkaran enerjik bir reaksiyonun (gözyaşları, intikam eylemleri vb. gibi gönüllü ya da istem dışı eylemler) gerekli olduğunu belirtmişlerdir. Burada tepki önemli bir unsurdur çünkü bir reaksiyonun varlığı gelecekteki semptomları belirleyebilmektedir. Başka bir deyişle, kötü bir anının ve tepkinin bastırılması migren de dahil olmak üzere gelecekte oluşacak bazı histerik belirtilere yol açabilmektedir. Bu nedenle, histerik hastaların belirtilerini azaltmak için Breuer ve Freud, eylem yerine dili kullanmışlardır. Başka bir deyişle, "konuşmak" orijinal tepkinin yerini almış ve "abreaksiyon" (duygusal boşalma) olarak adlandırılmıştır.

Breuer ve Freud'un çalışmaları ışığında bastırılmış olumsuz duyguların ifadesi psikosomatik bozuklukların tedavisinde önem kazanmıştır. Günümüzde, duygusal ketlemenin psikosomatik hastalıklar üzerindeki etkileri araştırmacılar için halen önemlidir ve baş ağrısı somatizasyonun en yaygın temsillerinden biri olarak düşünülür (Abbas, Lovas, & Purdy, 2008). Örnek verilecek olursa, Passchier, Goudswaord, Orlebeke ve Verhage (1988) yaptıkları çalışmada, duygusal engellemenin stresli bir durumdan sonra bir migren atağına katkıda bulunabileceğini keşfetmişlerdir. Ayrıca, çalışmalar, migrenlilerin duygularını bastırma ve öfkelerini başkalarına değil kendilerine yönlendirme eğiliminde olduğunu göstermiştir. Buna ek olarak, başka bir çalışmada kendine yönelen saldırganlığın seviyesinin yüksekliği, migren hastalarının baş ağrısı sıklığının yüksekliğini belirlemiştir (Passchier, Goudswaord, Orlebeke ve Verhage, 1988). Başka bir deyişle, olumsuz duygularını

ifade edemeyen ve kendilerine yönelten hastaların, migren ataklarını kendilerine yönlendirme olasılıkları artacaktır.

Aşağıdaki bölümde, üç duygunun ifade tipleri daha ayrıntılı olarak anlatılacaktır.

Öfke İfade Tipleri

Öfke ifadesi, yaygın kızgınlık, olumlu/bütünleyici kızgınlık, pasif kızgınlık ve kaçınmacı davranış olmak üzere dört kategoriye ayrılmıştır.

Yaygın kızgınlık, öfkenin en doğrudan ve tehdit edici tarzlarından biridir. Talepkar, tehditkar ve caydırıcı, nesneleri kıran tarzda davranış örünrüleriyle karakterizedir (DeGiovanni & Epstein, 1978; Rimm ve ark., 1974).

Öfke ifadesinin diğer bir türü Guerrero tarafından *olumlu/bütünleyici kızgınlık* olarak etiketlenmiş ve entegrasyon, iddia ve empati gibi kavramlarla açıklanmıştır (Guerrero, 1994'den akt. Guerrero, 1992). Olumlu/bütünleyici kızgınlık kullanan insanların partnerlerine daha fazla empati gösterdikleri , daha fazla kendilerini ifşa ettikleri ve daha çok problem odaklı yaklaşımı kullandıkları görülmüştür (Guerrero, Valley, & Farinelli, 2008).

Guerrero'nun (1994) tanımladığı üçüncü öfke ifadesi türü pasif agresyondur. *Pasif agresyon*, yaygın kızgınlık türü kadar tehditkar olup, diğer taraftan dolaylıdır. Başka bir deyişle, pasif agresyon kullanan insanlar genellikle partnerlerini korkutmaya çalışır, ancak bunu sessizlik içinde yaparlar.

Dördüncü ve son öfke ifade türü *kaçınmacı davranış*dır. Kaçınma, öfkeyi ifade etmenin pasif yoludur. Kaçınmacı davranışa sahip olan kişiler kendi duygularını inkar ederler (Guerrero, 1994).

Suçluluk İfade Tipleri

Anket, kişilerin suçluluk uyandıran durumlara nasıl tepki gösterdiğini değerlendirmek için geliştirilmiş ve özür dileme / affettirme, açıklama / gerekçelendirme, mazeret, reddetme / geri çekme olmak üzere dört suçluluk biçimi olduğu tespit edildi. Öncelikle özür / affettirme, kişinin kendi davranışından sorumlu olması ve suçluluk duyduğunda özür dilemesi olarak tanımlanmıştır. İkinci suçluluk ifadesi, açıklama / gerekçelendirmedir. Bu tür ifadeleri kullanan kişilerin, partnerlerine davranışları hakkında açıklama getirdikleri ve davranışlarının nedenini söyledikleri belirtilmiştir. Üçüncü suçluluk ifadesi, mazerettir. Mazaret, suçluluk hissettikten sonra eşe ekstra iyi davranma ve gelecekte çok daha iyi bir partner olacağına dair sözler vermek olarak tanımlanmıştır. Dördüncü ve son suçluluk ifade biçimi reddetme / geri çekme şeklindedir. Durumdan kaçınan ve bu konuda konuşmayan davranış kalıplarını içerir. Her ne kadar Guerrero ve meslektaşları (2008) dört farklı suçluluk ifadesini belirlediyse de Özen'in çalışması (2013) Türk kültürlerinde özür dileme/ affettirme, inkar etme ve açıklama getirme olmak üzere üç faktör yapısı ortaya çıkarmıştır. Başka bir deyişle, Türk kültüründe özür dileme ve mazeret faktörleri birleşmiştir.

Üzüntü İfade Tipleri

Pozitiflik / dikkat dağıtıcılık türü üzüntü ifadesi dikkati eğlenceli aktivitelerle dağıtmak ve üzüntüye odaklanmamak olarak tanımlanmaktadır. Bu tür bir ifade kullanan insanlar dikkatlerini sevdikleri faaliyetlere yönlendirir. İkinci tür üzüntü ifadesi sosyal destek arayışı olarak adlandırılmıştır. Bu tür üzüntü ifadesini kullanan kişiler, duygularını eşleriyle paylaşır ve onların dikkatini çekmeye çalışırlar. Üçüncü tür üzüntü ifadesi immobilizasyon olarak adlandırılır. Üzüntülerini ifade ederken hareketsiz kalan insanlar, üzüntüleri ile ilgili aktif olarak bir şey yapmamayı tercih ederken, gün boyu yatarak zaman geçirebilmektedirler. Dördüncü ve son tür üzüntü ifadesi yalnızlıktır, bu üzüntülüyken yalnız kalma arzusu olarak tanımlanmaktadır.

Guerrero, La Valley ve Farinelli (2008), immobilizasyon ve yalnızlık faktörlerini, çalışmalarında korelasyonlarının yüksek olması nedeniyle birleştirmiştir.

Kişilik ve Migren

Buraya kadar duygu ifadesi eksikliğinin olumsuz etkileri vurgulanmıştır; şimdi, kişilik gibi migren ataklarının diğer nedenlerini de ele almak önemlidir. Kişilik özelliklerinin, migren hastalarının ataklara yanıtlarını ve bu atakların hastanın yaşam kalitesi üzerindeki olumsuz etkisinin derecesini etkileyen en önemli psikolojik faktörlerden biri olduğu düşünülmektedir.

Kişilik kavramı ortaya çıktıktan sonra beş faktörlü model, kişiliği kavramak ve düzenlemek için yaygın olarak kullanılan bir çerçeve olarak kullanılmaya başlanmıştır (McAdams, 1992; Goldberg, 1990, 1993). Beş faktörlü model, dışa dönüklük, uyumluluk, sorumluluk (veya güvenilirlik), duygusal denge ve kültür olmak üzere beş kişilik özelliğini önermektedir. Kültür McCrae ve Costa (1987; Goldberg, 1990) tarafından daha sonra deneyime açıklık olarak adlandırılmıştır.

Kişilik özellikleri ve hastalıklarla ilişkileri ilgili araştırmalar çeşitli kişilik teorilerini baz almış ve şimdiye kadar pek çok kişilik değerlendirme aracını kullanmıştır. Bu araştırmanın sonuçları "hastalıklara yatkın" kişilik özelliklerini bulmuşlardır (Friedman & Booth-Kewley, 1987). Duygusal denge (neuroticism), migren hastaları için en yaygın kişilik özelliklerinden biri olarak vurgulanmıştır (Luconi ve ark., 2007'de akt., Cao, Zhang, Wang, Wang & Wang, 2002; Merikangas, Stevens & Angst, 1993). Touraine ve Draper'in (1934) araştırmalarına bakıldığında, migren hastaları ile duygusal hayal kırıklığı, güvensizlik, tereddüt ilişkileri bulunmuştur. Bu özellikler duygusal denge özelliğine sahip olmayan bireylerin özellikleriyle benzeştirilmiştir.

Amaçlar ve Hipotezler

Çalışma 2'nin Amacı

Yukarıda bahsedilen literatür ışığında, Çalışma 2'nin amacı hastalıkla ilişkili değişkenlerin (şiddet, sıklık, süre) ve kişilik özelliklerinin migren hastalarının yaşam kalitesi ve evlilik doyumu üzerindeki prediktif rolünü ve bu ilişkilerdeki duygusal anlatımın moderatör rolünü araştırmaktır.

Yöntem

Katılımcılar

Katılımcılar, en az son 6 ay boyunca evlilik veya romantik bir ilişki içine girme ölçütlerini karşılayan 150 migren hastasıydı. Yüz yirmi bir katılımcı kadın (% 80.7), 25 katılımcı erkek (% 16.7) ve 4 katılımcı cinsiyetini belirtmemiştir (% 2.7).

Sonuçlar ve Tartışma

İlk olarak, çalışmanın temel değişkenleri açısından (tanı konulma süresi, migren sıklığı, migren şiddeti, migren süresi, migren süresi, migrenin kontrol edilebilirliği, ilişki doyumu, yaşam kalitesi) demografik değişkenlerin düzeylerindeki grup farklılıklarına (cinsiyet, ilişki durumu, eğitim durumu, memleket, başka bir fiziksel hastalık öyküsü) bakılmış ve değişkenler arasındaki korelasyon incelenmiştir. Daha sonra, duygusal ifadenin düzenleyici rolünün, kişilik özellikleri, yaşam kalitesi, romantik ilişki doyumu arasındaki ilişki üzerindeki etkisinin araştırılması için düzenleyici analiz yapılmıştır

Düzenleyici Analizlerine İlişkin Bulgular

Çalışmanın bu bölümünde, öfke, üzüntü, ve suçluluk duygu ifadelerinin (yaygın kızgınlık, yalnız kalma/yıkıcı davranış ve özür dileme vb.) kişilik özellikleri (örn., nörotisizm, uyumluluk, dışa dönüklük), yaşam kalitesi (işlev kısıtlayıcı rol, işlev

önleyici rol, duygusal işlev vb.) ve romantik ilişki doyumu arasındaki ilişkinin düzenleyici etkisi incelenmiştir. Sadece anlamlı sonuçlar rapor edilmiştir.

Pasif Kızgınlığın, Uyumluluk ve Migrenin İşlev Kısıtlayıcı Rolü Arasındaki Düzenleyici Etkisi

Yaşam kalitesiyle ilgili olarak, pasif kızgınlık, uyumlu kişilik özellikleri ile migrenin işlev kısıtlayıcı rolü (RFR) arasındaki ilişkiyi bu çalışmada düzenlemiştir. Elde edilen sonuçlara göre, migren hastaları daha düşük pasif kızgınlık düzeyine sahipken, uyumluluk ve RFR arasında bir ilişki bulunamamıştır. Bununla birlikte, migren hastalarında daha yüksek pasif kızgınlık düzeyi olduğunda, uyumluluk ve RFR ilişkili bulunmuştur. Daha önce de belirtildiği gibi, migren, hastaların yaşamında kısıt yaratan kronik bir ağrıdır (Tkachuk ve ark., 2003; Ruiz de Velasco ve ark. 2003). Buna ek olarak, uyumluluk kişilik özelliği, sosyallik ile karakterizedir. Dolayısıyla, uyumlu kişilik özelliğine sahip olanlar, ihtiyaçları olan sosyal desteği bu şekilde karşılarlar (Wilkowski, Robinson, & Meier, 2006). Fakat, migren hastaları özellikle ataklar sırasında oldukça fazla acı çektikleri için, bir sosyal faaliyete katılmakta güçlük çekerler. Sosyallikle karakterize, uyumlu migren hastaları, olumlu sosyal davranışları (Wilkowski ve ark. 2006) nedeniyle katılamadıkları sosyal faaliyetlerden kaynaklanan hislerini doğrudan ifade edemeyebilirler. Bu duygularını doğrudan ifade edememelerinin bir başka nedeni ise sosyal çevreleri tarafından nefret edilme ve dışlanma korkuları olabilir (Ruiz de Velasco ve ark. 2003). Bu durum onları pasif agresif olmaya itebilir. Pasif agresif olmak da, kafalarındaki korkuyu doğrularcasına, diğer önemli kişiler tarafından tamamen yanlış anlaşılmalarına neden olabilir. Bu da migrenin hayatlarında oluşturduğu kısıtlamaların üstesinden gelmek için ihtiyaç duydukları toplumsal desteğin kaybolmasına neden olabilir. Sonuç olarak, uyumlu migren hastaları, pasif agresyonu kullanmaları nedeniyle sosyal desteği kaybetme ihtimaliyle karşı karşıya kalıp, migrenin hem sosyal hem de günlük yaşamlarını kısıtladığı yönünde bir algıya varabilirler.

Pasif Kızgınlığın, Uyumluluk ve Migrenin Duygusal İşlevi Arasındaki Düzenleyici Etkisi

Pasif kızgınlık, bir önceki bulguyla benzer olarak, uyumlu kişilik özellikleri ile migrenin duygusal işlevi (EF) arasındaki ilişkiyi düzenlemiştir. Elde edilen sonuçlara göre, migren hastalarında pasif kızgınlık düzeyi düşük olduğunda, uyumluluk ve EF arasında bir ilişki bulunamamıştır. Diğer yandan, migren hastalarının pasif kızgınlık düzeyi daha yüksek olduğunda, uyumluluk ve EF arasında ilişki bulunmuştur. Önceki bulgudan anlaşılacağı gibi, uyumlu migren hastaları pasif kızgın olarak gerçekte korktukları sosyal ilişkilerini kaybetme durumuyla karşı karşıya kalabilirler. Bu nedenle, pasif kızgın olmaları, kendilerini bir kısır döngü içine sokabilmektedir.

Pasif Kızgınlığın, Dışa Dönüklük ve Migrenin İşlev Kısıtlayıcı Rolü Arasındaki Düzenleyici Etkisi

Önceki iki bulguya benzer olarak, pasif kızgınlık, dışa dönük kişilik özelliği ile RFR arasındaki ilişkiyi düzenlemiştir. Elde edilen sonuçlara göre, migren hastalarında pasif kızgınlık düzeyi düşük olduğunda, dışa dönüklük ile RFR arasında bir ilişki bulunamamıştır. Bununla birlikte, migren hastalarında daha yüksek düzeyde pasif kızgınlık olduğu zaman, dışa dönüklük ile RFR ilişkili bulunmuştur. Çalışmanın daha önceki bölümlerinde belirtildiği gibi, dışa dönüklük, sosyallik, olumlu duygulanım ve hareketlilik ile karakterize olan bir özelliktir (McCrae & Costa, 1987). Literatürde migren, dışa dönüklük özellikleriyle ilişkili olmasa da, dışa dönüklük puanları yüksek olan migren hastaları, özellikle bu çalışmada pasif kızgınlık kullandıklarında, migreni oldukça kısıtlayıcı olarak algılamışlardır. Dış ortam aktivitelerinin kısıtlanması, migrene uygun yiyecek ve içecek seçme zorunluluğu, migrenin hastanın hayatında yarattığı temel fiziksel kısıtlamalardır. Dolayısıyla, sosyalliğin önemli olduğunu düşünen insanların, istedikleri yiyecekleri tüketememeleri ve ataklar sırasında dışarıya çıkmakta oldukça zorlanmaları migreni kısıtlayıcı olarak algılamalarına yol açabilir.

Pasif Kızgınlığın, Deneyime Açıklık ve Migrenin İşlev Önleyici Rolü Arasındaki Düzenleyici Etkisi

Yaşam kalitesi göz önüne alındığında, pasif kızgınlık, deneyime açıklık kişilik özelliği ile migrenin işlev önleyici rolü (RFP) arasındaki ilişkiyi düzenlemiştir. Bulgulara göre, migren hastaları daha yüksek düzeyde pasif kızgınlığa sahip olduklarında, deneyime açıklık ve RFP ile negatif ilişki göstermiştir. Ayrıca, migren hastalarında daha düşük pasif saldırganlık düzeyi olduğunda, deneyime açıklık ile RFP arasında pozitif bir ilişki bulunmuştur. Bununla birlikte, pasif saldırganlık düzeyi yüksek ve düşük düzeyler arasında bulunuyorsa, deneyim açıklığı ile RFP arasında anlamlı bir ilişki bulunamamıştır. Bu bulgu, yukarıda belirtilen üç bulgu ile tutarlı bulunmuştur. Buna göre, deneyime açık insanlar duygu spektrumundaki tüm duyguları deneyimleseler de (Costa & Widiger, 1990), duygu ifadeleri kültürel değerler nedeniyle sınırlandırılabilir. Kağıtçıbaşı'na (2007) göre, Türkiye halkı duygularını engellemek yerine aktif ya da pasif olarak ifade etmeye daha eğilimlidirler. Bu nedenle, deneyime açık migren hastaları duygularını mevcut çalışmada aktif olarak değil pasif olarak ifade etmeyi seçmiş olabilirler.

Bu bulgular, kişilik ve yaşam kalitesi arasındaki ilişkide duygusal ifadenin rolünün genel bir resmini çizmiştir. Bilişsel değerlendirme yaklaşımına (cognitive appraisal approach) göre, öfke engellenen bir hedefin değerlenmesine tepki olarak ortaya çıkan bir duygudur. Dolayısıyla, Harmon-Jones ve Harmon-Jones (2016), kişinin fiziksel olarak rahat olma hedefini engellemesi nedeniyle ağrının öfkeye neden olabileceğini belirtmiştir. Bu nedenle, öfkenin doğru bir şekilde ifadesi, bu çalışmanın bulguları yardımıyla migren için önemli bulgular arasında yerini almıştır. Olumsuz duyguların terapötik müdahale ile öğretilmesi ve müdahalenin etkilerinin değerlendirilmesi Çalışma 3'in odak noktası olacaktır.

Yaygın Kızgınlığın, Duygusal Denge (Nörotisizm) ve Romatik İlişki Doyumu Arasındaki Düzenleyici Etkisi

Romantik ilişki doyumunu göz önüne aldığımızda, yaygın kızgınlık, nörotisizm kişilik özelliği ile romantik ilişki doyumu (RRSS) arasındaki ilişkiyi düenlemiştir. Özellikle, katılımcılar daha yüksek yaygın kızgınlık skorlarına sahip olduklarında, daha yüksek nevrotik skorlara sahip olsalar bile, RRSS puanları daha yüksek bulunmuştur. Yüksek nörotisizme sahip migren hastaları, iç görüleri olmayan dürtüsellikleri fazla ve ben merkezci bireyler olabilir, bu nedenle yıkıcı tarz bir öfke ifadesi kullansalar bile, romantik ilişki doyumlarının yüksek olduğunu algılamış olabilirler. Çünkü ben merkezci bireyler için, diğer kişilerle empati kurmak olduça zordur. Böylece ilişkilerini diğerinin gözünden algılamakta güçlük çekmiş olabilirler. Bu durum, onların, partnerlerinin bu konudaki hissini göz önünce bulundurmadan, daha fazla ilişki memnuniyeti bildirmelerine neden olmuş olabilir. Nörotisizm, literatürde ağırlıklı olarak migrenle ilişkili bir kişilik özelliği olarak rapor edilmiştir (Cao ve ark., 2002, Luconi ve ark., 2007; Merikangas ve ark., 1993).

Yalnız Kalma/ Yıkıcı Davranışın, Uyumluluk ve Migrenin Duygusal İşlevi Arasındaki Düzenleyici Etkisi

Bu bulgu, üzüntü ifade türlerinden birinin düzenleyici rolüne sahip olduğu tek bulgudur. Bu, üzüntü ifadesinin migren hastaları için hayati bir rol oynayamayacağını gösteriyor olabilir. Yaşam kalitesi göz önüne alındığında, yalnız kalma / yıkıcı davranış, uyumlu kişilik özelliği ile migrenin duygusal işlevi (EF) arasındaki ilişkiyi düzenlemiştir. Özellikle, katılımcıların yüksek yalnız kalma / yıkıcı davranış puanları olduğunda, daha uyumlu oldukları zaman bile, EF puanları daha düşük (düşük yaşam kalitesi) olarak bulunmuştur. Uyumluluk özelliği, "yumuşak yüreklilik, empati, yardımseverlik ve bağışlayıcılık" ile karakterizedir, yıkıcı tip davranışa sahip değillerdir (Costa & McCrea, 1990, sayfa 3). Dolayısıyla bu bulgu literatürle tutarlı değildi. Bu tutarsız bulgunun altında yatan neden migrenin doğası olabilir. Daha önce de açıklandığı gibi, migrenin yaşamı kısıtlayıcı ve önleyici

özelliği uyumlu migren hastalarını başkalarıyla iletişimlerinde daha yıkıcı olmaya itebilmektedir. Bu şekilde, daha yüksek düzeyde yalnız kalma / yıkıcı davranış kullandıklarında, daha uyumlu kişiler olsalar bile, duygusal işlevleri daha düşük olabilmektedir.

ÇALIŞMA 3

MİGREN HASTALARI İÇİN DUYGU İFADESİ MÜDAHALESİ: BİR GRUP TERAPİSİ

Giriş

Kronik Hastalıklar için Müdahaleler

Çalışma 2'de daha önce belirtildiği gibi migren, hastaların yaşam kalitesini düşüren ve birçok açıdan günlük hayatlarını olumsuz etkileyen kronik bir durumdur. Araştırmacılar günümüze kadar migren etiyolojisini bulmaya çalışsalar da, gelişimine katkıda bulunan faktörleri ve kesin tedavisini açıkça tespit edememişlerdir. Bu, araştırmacıları, hastalara yardım sunmanın alternatif yollarını bulmak için motive etmiştir. Psikoterapi, migrenin medikal tedavisinin yanı sıra, araştırmacılar ve uygulayıcılar tarafından migren ve migrenin etkileri ile ilgili bir tedavi sunmak için en çok kullanılan tekniklerden biridir. Bu nedenle, bir sonraki bölüm esas olarak kronik hastalıkların tedavisinde kullanılan müdahale tekniklerine odaklanacaktır.

Şimdiye kadar migren ve diğer kronik hastalıklar için aile terapisi, bilişsel davranışçı terapi (CBT), gevşeme eğitimi, yazılı duygu ifadesi gibi birçok psikolojik müdahale tekniği kullanılmıştır. Bu bölümde, bu çalışmada uygulanan müdahale tekniğinin alt yapısıyla ilgili bilgiler verilecektir.

Müdahalenin Teorik Alt Yapısı

Kronik hastalıklarda duyguların açık olarak ifade edilmesinin önemi bugüne kadar birçok kez belirtilmiştir. Çalışma 2'de belirtildiği gibi, herhangi bir duygunun

engellenmesi hastalıklarla yakından ilişkilidir. Örneğin, duyguları bastırma sürecinin fiziksel hastalıklarla ilişkisini araştıran çalışmalar, insanların hissettikleri duyguyu gizlemelerinin solunumlarında artışa neden olduğunu kanıtlamıştır. Dahası, bastırma sürecinin onlar için çok stresli bir durum oluşturduğunu ve hastalıklara karşı daha savunmasız hale getirdiği belirtilmiştir (Pennebaker, 1997). Bu nedenle, Çalışma 3'ün amacı, migren hastalarına uygulanacak bir duygu ifadesi müdahalesi geliştirmek, uygulamak ve onun etkinliğini test etmektir.

Bu çalışmanın müdahale programı Yalom'un (1995) Grup Psikoterapisi Teorisi ve Uygulamasına dayanmaktadır. Yalom'a göre, grup oluşturmak, kuralları belirlemek, gruba adaptasyon ve sonlandırma aşamaları tek tek ele alınmak alınmalıdır. Bu nedenle, bu çalışmada, grup müdahalesinin çerçevesi Yalom'un teorisine bağlı olarak geliştirilmiştir.

Öte yandan, grup terapisinin içeriği, duygusal ifade literatürü ve araştırmacının kişisel terapötik deneyimleri ışığında oluşturulmuştur.

Sağlıklı duygusal dışavurum kavramı, her çalışmada veya uygulamada benzer özelliklere sahiptir. Duygu ve duygu ifadesi ile ilgilenen araştırmacılar genelde duygusal farkındalık, duyguların tanımlanması ve duyguların ifadeleri ile ilgilenmiştir. Örneğin, Paul Eckman'ın (duygu alanındaki en tanınmış bilim adamlarından) bir parçası olduğu bir grup araştırmacı, katılımcıların olumsuz duygularını azaltmak için bir duygusal eğitim tasarlamuştır. Eğitim programı, duygunun tanınması, kişinin kendi duygusal kalıplarından ödün vermesi, diğerlerinin duygularının tanınması ve empati gibi duygusal bileşenler içermektedir (Kemeny ve diğerleri, 2012). Benzer şekilde, Illionis Üniversitesi Danışma Merkezi, Kemeny ve arkadaşlarının (2012) çalışması ile benzer kavramları içeren duygusal deneyim ve ifade ile ilgili kendi kendine yardım broşürü yayınlamıştır. Duygusal deneyim ve ifade için kullandıkları kavramlar duyguları tanımlamak, duyguları kabul etmek ve değerlendirebilmek, yorumlamanın rolü ve duygularını ifade etmek olmuştur (University of Illinois Urbana-Champaign Danışma Merkezi, 2017). Sonuç olarak,

duygu ifadesini inceleyen ve uygulayan araştırmacılar ve uygulayıcılar az çok benzer kavramları kabul etmiş ve kullanmştır. Dolayısıyla, bu çalışmanın müdahale programını tasarlarken, çoğunlukla bu kavramlardan yararlanılmıştır.

Literatürdeki müdahale tekniklerine dayanarak, mevcut araştırmanın müdahale programı duyguları farkında olmak, duyguyu tanımlamak, duygulara değer vermek, farklı yorumları analiz etmek ve duyguları yapıcı bir şekilde ifade etmek şeklinde belirlenmiştir. Diğer çalışmaların aksine, mevcut müdahale programı üç olumsuz duygu için tasarlanmıştır, bunlar; öfke, üzüntü ve suçluluk duygusudur.

Çalışma 3'ün Amacı

Bu çalışmanın amacı, migren hastalarının yaşam kalitesini ve evlilik doyumunu, onlara duyguları anlama ve işlemeyi ve duygularını ifade etmeyi öğretmektir. Bu bağlamda, Çalışma 3, migren hastalarına verilen duygusal ifade eğitiminin yaşam kaliteleri ve evlilik doyumları açısından etkisini araştırmayı amaçlamıştır.

Yöntem

Müdahale Programı

Müdahale, kısa süreli bir grup psikoterapisi olarak planlandı. Buna göre, grup terapisinin amaçları, migrene ilişkin temel bilgiler sunmak, duygusal ifadenin önemini belirtmek ve duygusal ifadenin temel adımlarını öğretmek olarak belirlendi. Ayrıca, en önemli hedeflerden biri, yukarıda belirtilen konularda katılımcıların düşünce ve duygularını paylaşmalarını sağlamaktı. Grubun kurulması, grup kuralları, adaptasyon ve sonlandırma aşamalarının belirlenmesi, Yalom'un (2002) Grup Psikoterapisi Teorisi ve Uygulaması kitabına göre yapılandırılmıştır. Grup 8 haftalık (90 dakikalık) bir kapalı grup olarak planlandı. Her oturumun içeriği kısaca aşağıda belirtilmiştir.

1. Oturum: Birinci oturumun genel amaçları, müdahalenin süreci ve içeriği hakkında bilgi veren müdahalenin amacını ortaya koymaktır.
    - Toplantıların amacını açıklama
    - Migren hastaları için grup müdahalesinin önemini belirtme
    - Grup üyelerinin tanışması
    - Grup kurallarını belirleme, grup üyeleri ile sözleşme yapma
    - Isınma faaliyetleri
    - Migren ve migrenin ortaya çıkardığı engellerle ilgili deneyimlerin paylaşımı
2. Oturum: İkinci oturumun genel amacı, grup üyelerine duygusal ifadeyi tanıtmaktır.
    - Son oturumun özetlenmesi
    - Isınmaya devam edilmesi
    - Migren ve migrenin oluşturduğu engellerle ilgili deneyim paylaşımı
    - Duygusal ifade basamaklarıyla ilgili bilgi verilmesi.
3. Oturum: Üçüncü oturumun genel amacı, duygusal ifadenin ilk adımını ele almaktır.
    - Son oturumun özetlenmesi
    - Duygu tanımlamayı ele almak
    - Duyguların tanımlanmasıyla ilgili kişisel deneyimlerin paylaşılmasını sağlamak
4. Oturum: Dördüncü oturumun genel amacı, duygusal ifadenin ikinci adımını tartışmaktır.
    - Son oturumun özetlenmesi
    - Duygu kabulünü ele almak.
    - Duyguların kabulü ile ilgili kişisel deneyimlerin paylaşılmasını sağlamak
5. Oturum: Beşinci oturumun genel amacı, duygusal ifadenin üçüncü adımını tartışmaktır.
    - Son oturumun özetlenmesi
    - Duygu ifadesini ele almak
    - Duygu ifadesi ile ilgili kişisel deneyimlerin paylaşılmasını sağlamak.

6. Oturum: Altıncı oturumun genel amacı, duygu ifadesinin her adımını kişisel deneyimlerle birlikte paylaşmaya devam etmektir.
    - Son oturumun özetlenmesi
    - Duygu ifadesini ele almak.
    - Duyguların ifadesi ile ilgili kişisel deneyimleri paylaşma.
7. Oturum: Yedinci oturumun genel amacı, grubu sonlandırmak için hazırlamak ve geri bildirim almaktır.
    - Son oturumun özetlenmesi
    - Müdahale hakkında geribildirim almak
    - Toplantıların sona erdirilmesi için grubun hazırlanması
8. Oturum: Sekizinci oturumun genel amacı müdahaleyi sonlandırmaktır.
    - Bütün grup deneyiminin özetlenmesi
    - Tüm grup deneyimi için ve grup üyelerine bireysel olarak geribildirim vermek
    - Gerekirse hastaları daha ileri tedavi için yönlendirmek.
    - Vedalaşma

Sonuç ve Tartışma

Yaşam Kalitesi için Bağlantılı Örneklem Wilcoxon İşaretlenmiş Sıralar Testi

Yaşam kalitesi (yani, RFR, RFP ve EF) açısından ön test ve son test arasındaki medyan farklılıkları incelemek amacıyla, Wilcoxon işaretlenmiş sıralama testi uygulanmıştır. Bulgulara göre, yalnızca yaşam kalitesinin RFR alt ölçeği açısından anlamlı bir medyan farkı bulunmuştur. Bu sonuçlar, sekiz seanslık duygu ifade grup psikoterapisinin, yaşam kalitesinin RFR boyutunu arttırmada etkili olduğunu ortaya koymuştur. Literatürde bu bulguyu destekleyen çalışmalar vardır. Zorlayıcı baş ağrısı hastalarıyla çalışan bir araştırmada, bilişsel-davranışsal tedaviden sonra yaşam kalitesinde belirgin bir artış olduğu raporlanmıştır (Nash ve ark., 2004; Martin ve ark., 2015). Mevcut çalışmanın bu bulgusunun altındaki olası mekanizma bir sonraki bölümde açıklanacaktır.

Duygu İfadesi için Bağlantılı Örneklem Wilcoxon İşaretlenmiş Sıralar Testi

Duygusal ifade türlerinin (yani pasif kızgınlık, yalnızlık / olumsuz davranış, özür) ön test ve son test arasındaki medyan farklılıklarını incelemek amacıyla bağlantılı örneklem Wilcoxon işaretlenmiş sıralama testi yapılmıştır. Bulgulara göre, müdahale öncesi ve sonrası testler arasında pasif kızgınlık açısından anlamlı bir fark bulunmuştur. Diğer bir deyişle, grup psikoterapisi, mevcut çalışmaya katılan 9 kişiden 8 migren hastasının pasif kızgınlık düzeyinde bir azalma sağlamıştır. Şimdiye kadar duygu ifadesi müdahalesini yazılı (WED) bir biçimde kullanan birçok çalışma vardır (ÇED). Genel olarak, diğer müdahale tiplerinin (yani gevşeme eğitimi) WED müdahalelerinden daha etkili olduğu rapor edilmiştir (Slavin-Spenny ve ark., 2013). Bu nedenle, çalışmalar, duygu deneyimleme ve ifade etme gibi duygusal aktivasyon konularında daha fazla araştırma yapılmasını önermiştir (Slavin-Spenny ve ark., 2013). Çalışma 3, migren hastaları için duygu ifadesi müdahalesi açısından literatürdeki ihtiyaçları karşılamak için değerli bulgular sağlayabileceği düşünülmüştür.

Bu çalışmanın en göze çarpan güçlülüğü, müdahale tekniği içermesi olarak düşünülebilir. ABD'de ve diğer birçok ülkede, sigorta şirketleri migren için uygun maliyetli tedaviler bulmaya çalışmaktadır, ancak çalışmalar bugüne kadar kalite ve miktar açısından tatmin edici bulunmamıştır (Brown ve ark., 2008, Dahlöf ve Solomon, 1998). Bu çalışma, bu açıdan değerli ön bilgi sağlamaktadır.

Bu çalışmanın bir diğer önemli katkısı ise, duygusal ifadenin migren tedavisinin en önemli unsurlarından biri olduğu fikrini öne sürmesi ve bununla ilgili bulgular ortaya koymasıdır.

APPENDIX L: CIRRUCULUM VITAE

PERSONAL INFORMATION

Surname, Name: Kaya Kurtman, Pınar
Nationality: Turkish (TC)
Date and Place of Birth: 28 February 1987, Zonguldak
Marital Status: Married
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email: pinarkayakurtman@gmail.com

EDUCATION

2010 - 2017	Post Bachelor's Ph.D. in Clinical Psychology, Middle East Technical University, Ankara
2005 - 2010	B.S. in Department of Psychology, Middle East Technical University, Ankara

INTERNSHIP & WORK EXPERIENCE

Year	**Place**	**Enrollment**
2014- Present	Private Practice in Clinical Psychology	Clinical Psychologist
2015 October-2016 February	İstanbul AREL University	Part-Time Instructor
2015 October-2017 February	Boğaziçi University Sarıtepe Campus Student Support Unit (BUSOD)	Clinical Psychologist
2013 December -Present	Ayna Clinical Psychology Journal	Referee
2011-2014	Middle East Technical University AYNA Clinical Psychology Support Unit	Clinical Psychologist
2011-2012, Fall	Hacettepe University Hospital, Child Psychiatry Department	Intern Psychologist
2010-2011, Spring	Ankara Numune Hospital, Psychiatry Department	Intern Psychologist
2009 June	Gazi University Hospital, Psychiatry Department	Intern Psychologist
2008 July-August	Zonguldak Karaelmas University Hospital, Psychiatry Department	Intern Psychologist

FOREIGN LANGUAGES

Advanced English

APPENDIX M: TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü	☐
Sosyal Bilimler Enstitüsü	X
Uygulamalı Matematik Enstitüsü	☐
Enformatik Enstitüsü	☐
Deniz Bilimleri Enstitüsü	☐

YAZARIN

Soyadı : Kaya Kurtman
Adı : Pınar
Bölümü : Psikoloji

TEZİN ADI (İngilizce): The Relations Among Personality Traits, Emotional Expression, Quality of Life And Relationship Satisfaction of Migraine Patients: An Emotional Expression Group Therapy Practice

TEZİN TÜRÜ : Yüksek Lisans ☐ Doktora X

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. X
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ☐

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: