Biannual Journal of Gender and Social Issues
Autumn 2017, Vol. 16, Number 2

The Mediating Role of Social Support on the Relationship Between Perceived Locus of Control, Quality of Life and Depression Among Male and Female Migraine Patients

Abstract

The aim of conducting the present study was to investigate the relationship between locus of control, quality of life and depression among migraine patients. The sample of N=100 (males/females) migraine patients, age ranging between 25-50 were taken from Benazir Bhutto Hospital and District Head Quarter Hospital located in Rawalpindi. In order to measure locus of control, quality of life, depression and social support, the Urdu version of The Multidimensional Health Locus of Control Scale (MHLC), The Quality Of Life Scale (WHOQOL), The Beck's Depression Inventory (BDI) and The Multidimensional Scale of Perceived Social Support (MSPSS) were used. After the data collection the data was analyzed by SPSS version 21. The findings of this study revealed that a negative relationship exists between social support and depression. Results also showed that there is a positive relationship between quality of life and social support. Similarly it revealed that a positive relationship exists between internal locus of control and social support. The findings of this study also elaborated that gender plays a moderating role between social support, locus of control, quality of life and depression among male and female migraine patients. Furthermore, the results of this study explored that social support plays a mediating role between locus of control, quality of life and depression across male and female migraine patients. This study will be helpful for psychologists and other health professional in planning interventions in the management of migraine related disabilities.

Keywords: *Social Support, Locus of Control, Depression, Quality of Life and Migraine Patients.*

_____

Ms. Sara Ghazal
MS Clinical Psychology Foundation University, Rawalpindi Campus
Email: saraghazal5@gmail.comm
Dr. Tanvir Akhtar
Head Department of Psychology/ Director Counseling Foundation University, Rawalpindi Campus
Mr. Muhammad Aqeel
Lecturer, Department of Psychology, Foundation University, , Rawalpindi Campus.

INTRODUCTION

Migraine is rated at 19th position among all the diseases that cause disability according to the World Health Organization and is the 12th leading cause of years lived with disability among individuals of all ages worldwide (Koehler & Weil, 2001). It is a strange disease which characterizes extreme headaches, feelings of heaviness, forehead over fullness, mostly present at one side of head, occurs in form of attacks. Other common symptoms include vomiting, nausea. dizziness, loose motions, sensitivity to light and sound. It is common form of headache which is prevalent about 10-12% in general population (Dtripathi, 2003). The attack can occur for at least 15 days a month, the frequency and severity of headaches can increase form months to years and from mild to severe migraine (Lipton et al., 2008). Migraine is experienced by both males and females commonly between the age 25 to 39. Two main types of migraine are "migraine with aura" and "migraine without aura" (Ferrari, 1998). All over the world prevalence rate of migraine in general population is about 1.4 to 2.2 % (Stovner et al., 2013). Migraine a common problem is affecting many people of under developed countries. In Pakistan often migraine patients remain undiagnosed because diagnostic tools of migraine are not frequently used (Noushad et al., 2013). At community level some studies have been conducted (Bokhari et al., 2008). The prevalence of chronic migraine is around 3 to 4% and 0.5 to 7.3% of adults in the western countries (Wiendels et al., 2006). In the Asia pacific region the prevalence of chronic migraine is about 1.0 to 3.9%. It is the most frequently occurring type of migraine (Natoli et al., 2010).

Studies have revealed that higher levels of external locus of control are related with higher levels of depression, many researchers have found that a relationship exists between depression and locus of control (Hooke & Page, 2002). Moreover, migraine headache pain patients who have higher external locus of control are more likely to experience greater decreased functioning, impairment and increased occurrence of maladaptive coping behaviors as compared to patients with high internal locus of control (Coughlin, Badura, Fleischer & Guck, 2000). There are widespread gender differences in depression; women tend to seek greater help for depression than men (Wilhelm et al., 2002). Studies have also shown that males tend to score more on internal locus of control and females score more on external locus of control (Ghasemzadeh, 2011). However, this trend has not been consistently proven in the literature. On the other hand, studies have demonstrated that males tend to show more external locus of control whereas females tend to have more internal locus of control (Andreoletti, Zebrowitz & Lachman, 2001). Role of social support in individuals is cross sectional in nature about whether people with physical and mental health problems are likely to develop or maintain low functioning social support system and whether social support serve s a risk factor for both physical and mental health

problems (Gottlieb & Bergen, 2010). In many studies low social support have been associated with depression (Forgeron et al., 2010). Further, studies have also shown that generally women have varied and larger social support and networks than men (Paskulin & Vianna, 2007). Previous studies have found supportive social environment especially family and friend's acceptance is also significantly related with quality of life. Isolation, rejection or alienation can threaten ones quality of life (Ichikawa & Natpratan, 2006). Researchers believe that low social support can lead to medical as well as mental health problems such as depression by affecting the quality of life of an individual (Gabbe et al., 2012). Furthermore, studies on gender have revealed that men usually score more in quality of life domain as compared to women in some studies though these findings lack empirical evidence (Chandra et al., 2009).

According to many studies locus of control beliefs affect coping with the problem. For example an individual with strong internal locus of control may perceive a stressful situation in his personal control. A person with internal locus of control is more likely to cope with stresses and may feel more socially intact in society (Peacock & Wong, 1996). Findings of the recent studies reveal that quality of life is directly related with internal locus of control in health domain. Furthermore, it has been suggested that people having internal locus would cope better with heath related problems, have better quality of life and less psychological problems (Theofilou, 2011). Many studies on migraine have indicated that there is a strong relationship between co-morbid depression and poor quality of life. Beside the migraine related disabilities, depressive symptoms appeared to decrease quality of life of migraine patients (Rothrock et al., 2007). M

Migraine is a disease characterized as recurring, painful and severe headache affecting the one side of head (Lipton et al., 2008). Recent studies have revealed that there is considerable impairment in quality of life of all migraine patients. It was also maintained that depression plays an important role in severity of migraine patients (Boes & Capobianco, 2005). These symptoms limit the capacity to perform complete household shores, to perform professionally and limit social relations (Rutberg, & Ohrling, 2012). Considering the assumptions quoted in the researches the present research will study the locus of control of migraine patients. This study will also help to find out the rate of depression among migraine patients. The study was conducted in Rawalpindi city of Pakistan. In addition, the aim of this research is to study the migraine related disabilities and to explore the impact of social support on them.

Objectives:

1. To find out the relationship between social support, locus of control, quality of life and depression among migraine patients.

2. To study the mediating role of social support between locus of control, social support, quality of life and depression across migraine patients.
3. To study the moderating role of gender between social support, locus of control, quality of life and depression among migraine patients.

Hypotheses

1. Quality of life is positively related with internal locus of control and social support.
2. Quality of life is negatively related with depression.
3. Internal locus of control is positively related with social support.
4. Internal locus of control is negatively related with depression.
5. Social support is negatively related with depression.

RESEARCH METHODOLOGY

It is a co relational study, based on survey research designed to find out the moderating role of social support on the relationship between perceived locus of control, quality of life and depression among male and female migraine patients. The sample of this study consisted of (N=100) migraine patients who were selected from the outpatient department (OPD) of Benazir Bhutto Hospital (BBH) and District Headquarter (DHQ) Hospital form Rawalpindi, Pakistan. Only those patients were selected as migraine patients who fulfilled the diagnostic criteria of migraine headaches according to International Headache Society (IHS, 2013). In this study purposive sampling technique was used for data collection. Only those patients were selected as migraine patients who fulfilled the diagnostic criteria of migraine headaches according to International Headache Society (IHS, 2013). Informed consent was obtained from the participants before assessment.

The Multidimensional Health Locus of Control (MHLC) scale was developed in 1976 by Ken Wallston and his colleagues. This scale is designed to measure an individual's beliefs about a person's health which are reflected by the actions of a person in contrast to fate, chance or luck and if LOC is internal i.e., dependent on individual's own action or external LOC i.e., reliant on actions of others. The MHLC scale consist of three forms A, B and C, each containing three subscales (Internal, chance and powerful others) of six items. The sum of the values marked for every item on the subscale is the score on each subscale where 1= "strongly disagree and 6 = "strongly agree". Before summing no items need to be reversed. Each of the subscale is independent of one another. In MHLC there is no such thing as total score. The alpha reliabilities of six item subscales are about .79. The WHOQOL scale was developed with fifteen international centers by the WHOQOL group (Orley & Kuyken, 1994;

Szabo, 1996; WHOQOL Group 1994a, 1994b, 1995). It was designed to assess an individual's facet related to quality of life that would be applied cross culturally. It is a self-report questionnaire. The short version of WHOQOL have been used in this study. The WHOQOL- BREF has a total of 26 items. It contains four domains i.e., physical, psychological, social relationships and environment domain. Participants respond on a 5 point Likert scale where 1 = not at all and 5 = completely. Higher score on scale reflects higher quality of life. Raw scored are converted into transformed scores. The scores of all domains are reported between 4 - 20 and for each mean score are multiplied by 4 according to the user manual. The Pearson's reliability for WHOQOL- BREF is excellent and its subscales range between 0.84 - 0.95. The validity of this scale ranges between 0.45 - 0.75. The Beck Depression Inventory (BDI) was developed by Aaron T Beck in 1996. BDI measures specific symptoms that are consistent with description of depression (Beck, A.T., Steer, R.A., & Brown, G, 1996). It assesses 21 depression symptoms from which 15 cover emotions, 4 are of behavioral changes and 6 covers somatic symptoms. Each response is reported on a scale of 0-3. For scoring 0 to 9 indicates no depression, 10 to 18 indicate mild depression, 19 to 29 indicates moderate depression and 30 to 63 indicates severe depression. Studies have maintained that BDI is found to be highly reliable test and has good validity. The Cronbach alpha reliability of BDI is .93.

The Multidimensional Scale of Perceived Social Support (MPSS) scale was designed to assess social support (Zimet, Dahlem, Zimet, & Farley, 1988). This scale measures social support subjectively from three sources i.e., Family, Friends and Significant Other. MSPSS scale consists of 12 items. This instrument uses a 5 point Likert scale where 1 shows "low support" and 7 shows "high social support". MSPSS was translated in many languages such as Spanish, Chinese, French, Italian and Urdu. An Urdu version of MSPSS is used in this study. For this scale no established population norms are there. Low score on this scale indicates low social support and high score indicates high social support. According to many studies this scale shows good test retest, internal reliability and good validity. The Cronbach alpha reliability of MSPSS ranges between .87-91. The study was conducted on the sample of 100 migraine patients diagnosed by medical physicians in hospital. Data was collected from Benazir Bhutto Hospital (BBH) and District Head Quarters (DHQ) from Rawalpindi city. The research protocols were administered individually to the migraine patients by the researcher herself. The research protocol include Demographic sheet, Multidimensional Health Locus of Control (MHLC), The World Health Organization Quality Of Life (WHOQOL), The Beck Depression Inventory (BDI) and The Multidimensional Scale of Perceived Social Support (MSPSS). Consent was taken from the participants before filling the questionnaires.

RESULTS & ANALYSIS

The present study is designed to study the moderating role of social support on the relationship between perceived locus of control, quality of life and depression among migraine patients. Various statistical procedures were used to analyze the data. The psychometric properties of scale was established by computing item total correlation, inter subscale correlation and Cronbach's alpha. The method of Pearson correlation was employed to determine associations between variables in this study. Independent sample t test was used to find differences between male and female migraine patients. Regression analysis was used to find out moderation and predictive role of age between social support and depression among migraine patients.

Table1: *Correlation Matrix between QOL, LOC, SSS, BDI and its Subscales. (N=100)*

	No of items	A	M	SD	1	2	3	4	5	6	7	8	9	10	11
QOL	26	.88	73.9	14.2	-	.748**	.892**	.730**	.883**	.148	.351**	-.270**	-.070	.736**	-.707**
PHY	7	.54	18.7	3.77		-	.561**	.351**	.516**	.015	.196	-.121	-.190	.617**	-.544**
PSY	6	.71	17.4	4.52			-	.599**	.704**	.166	.346**	-.242*	-.074	.658**	-.627**
SOC	3	.63	9.27	2.56				-	.597**	.197	.304**	-.273**	.107	.527**	-.578**
ENV	8	.69	22.9	4.72					-	.128	.306**	-.260**	-.026	.600**	-.582**
LOC	18	.36	71.3	7.79			.			-	.462**	.143	.413**	.118	-.198*
INLOC	6	.96	22.4	10.8							-	-.691**	-.255*	.436**	-.380**
CLOC	6	.91	21.1	7.54								-	.108	-.368**	.270**
OLOC	6	.86	27.8	4.92									-	-.143	.050
SSS	12	.93	46.9	14.7										-	-.794**
BDI	21	.90	30.3	11.9											-

Note:1. QOL=Quality of Life Scale, 2.PHY=Physical Health, 3.PSY= Psychological, 4. SOC= Social Relationships, 5.ENV= Environment, 6.LOC=Locus of Control Scale, 7. INLOC= Internal Locus of Control, 8.CLOC= Chance Locus of Control, 9.OLOC= Others Locus of Control, 10.SSS=Social Support Scale, BDI= Beck Depression Inventory.

Pearson's correlation was computed in this table in order to assess the relationships between variables. The quality of life scale α= .88 was found to be a highly reliable scale. The Cronbach's alpha reliability of locus of control scale is α= .36. The alpha reliability of subscales internal locus of control of 6 items, chance locus of control of 6 items and powerful others locus of control is α= .96, α= .91 and α= .86 respectively which indicated that it is highly reliable scale. The social support scale was found to

be highly reliable with α= .93. The Cronbach's alpha reliability of beck depression inventory is α= .90, which indicated that it is a highly reliable inventory. There is positive correlation between quality of life and internal locus of control r=.351**, *p*< .001. The table 2 also shows that correlation between quality of life and social support is r= .736**, *p*< .001 which indicates strong positive correlation between them. The correlation between quality of life and depression is significant and are negatively correlated r= -.707, *p*< .001. The correlation between social relationships and internal locus of control is positive r= .304**, *p*<.005. The correlation analysis also indicated that of control and social support are positively correlated r= .436**, *p*< .001. There is a negative correlation between internal locus of internal locus control and depression r= -.380**, *p*< .001. The correlation analysis also displayed that social support is negatively correlated with depression r=-.794**, *p*<.001

Table 2: *The mediating role of social support among locus of control, depression and quality of life across male and female migraine patients (N=100).*

	Social Support			Internal Locus Of Control			External Locus Of Control			Quality of Life		
Variables	B	SE	β	B	SE	β	B	SE	β	B	SE	B
Male Migraine Patients												
BDI	-.96	.098	-.78***	-.200	.149	-.222	.011	.019	.111	-.553	.143	-.499***
SS				.265	.120	.365**	-.004	.015	-.057	.297	.118	.332**
IOC										-.009	.122	-.007
EOC										1.848	.963	.160**
Female Migraine Patients												
BDI	-1.03	.12	-.83***	.116	.221	.153	-.002	.026	-.028	-.077	.171	-.074
SS				.225	.178	.370	.008	.021	.110	.675	.141	.802***
IOC										-.098	.133	-.070
EOC										-1.60	1.135	-.132

The mediating role of social support among locus of control, depression and quality of life across male and female migraine patients. This independent model fit the data effectively, $x^2(2) = 4.81$, $p < .09$, $x^2/df = 2.41$, CFI = .98, NFI = .97, IFI = .98.

Mediation analysis was computed in this table to find out the mediating role for social support among locus of control, depression and quality of life across male and female migraine patients. The result of this table revealed that depression was negatively significant predictor for social support (β= -.78. p < .01) and quality of life (β= -.49. p < .01) in male migraine patients. The results also displayed that social support was positive significant predictor for internal locus of control (β= .36, p < .01) and quality of life (β= .33, p < .01) in male migraine patients. The results further revealed that external locus of control was positively significant predictor for quality of life (β= -.16, p < .01) in male migraine patients. The result of this table revealed that depression was negatively significant predictor for social support (β= -.83. p < .01) in female migraine patients. The results also displayed that social support was positive significant predictor for quality of life (β= .80, p < .01) in female migraine patients.

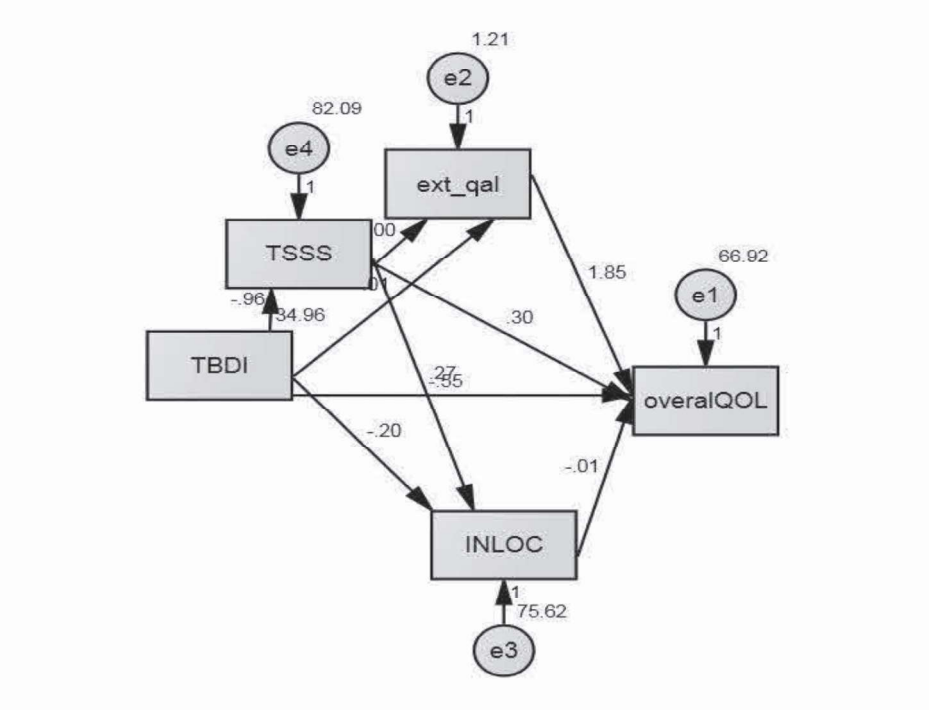

Figure 1

This Figure shows the mediation model by using Amos (Version 23.0) for illustrating the mediating role of social support among locus of control, depression and quality of life across male migraine patients.

Figure 1 shows that depression and quality of life are negatively related in male migraine patients. The results also displayed that social support was positive significant predictor for internal locus of control and quality of life are positively

related in male migraine patients. The figure also shows that social support plays a mediating role between locus of control, depression and quality of life across male migraine patients.

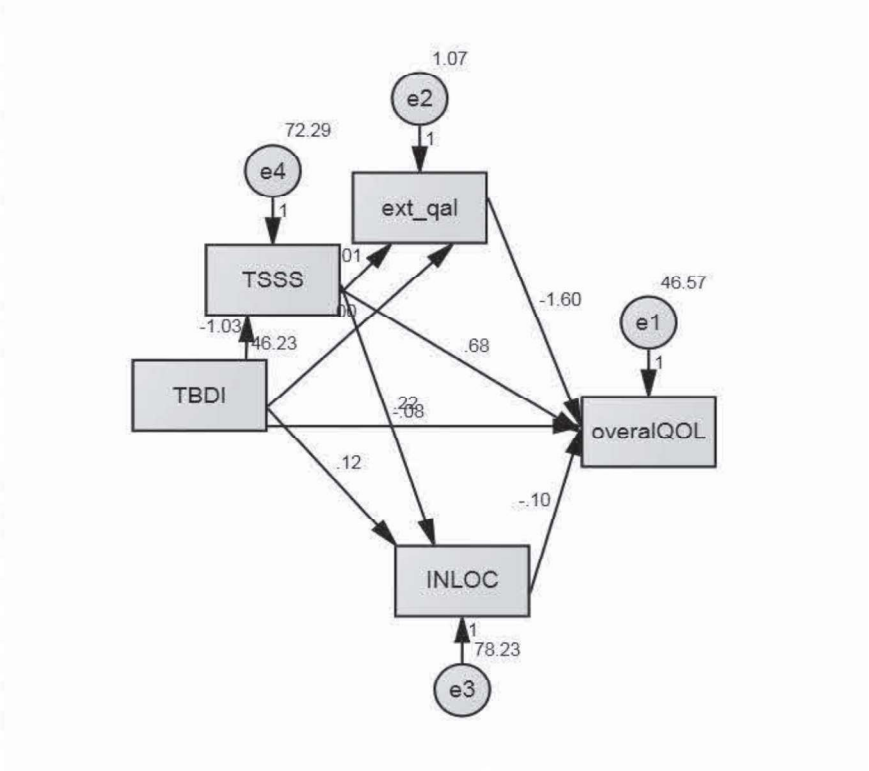

Figure 2

The above Figure shows the mediation model by using Amos (Version 23.0) for illustrating the mediating role of social support among locus of control, depression and quality of life across female migraine patients. The figure 2 shows that depression was negatively significant predictor for social support in female migraine patients. The results also displayed that social support was positive significant predictor for quality of life in female migraine patients.

The present study was designed to probe the relationship between social support, locus of control, quality of life and depression among migraine patients. Second, it aims to study the mediating role of social support between locus of control, quality of life and depression among migraine patients. Another purpose of this study was to explore the moderating role of gender between all variables. The current data suggests that quality of life is significantly and positively related to internal locus of control (Table 1). The results in correlation analysis confirmed this hypothesis and demonstrated that patient's with high internal locus of control will have better quality of life. These results are in line with the previous studies which indicated the patient's

cognition about their ability to control headache and the belief that factors influencing headache are within their control that is internal locus of control may have improved quality of life and less headache related disabilities. Moreover people with internal locus of control who believed that factors that influence their headache were within their control were able to manage their headache (Lipton et al., 2001). It is claimed in this study (Table 1) that quality of life is positively related to the social support. Many studies have maintained that with pain disorders, deficits in social relation has been related with poor quality of life (Imhof et al., 2013). Further, this study suggested that quality of life is negatively related to depression. This result is consistent with the findings of a study which indicated that depression has negative impact on the headache management and quality of life of patient, it do not occur in a vacuum (Rothrock, Lopez, & Zweilfer, 2007).

It is also evident in the present study (Table 1) that internal locus of control is positively related to social support. It is in line with the previous studies which maintained that individuals with high control on their health condition may be more optimistic about abilities to attain control, to underestimate the risk in stressful situations and to overestimate their invulnerability (Hornby, & Seligman, 1991). The current study (Table 1) claims that internal locus of control is negatively related to depression. Many researches about depression with cognitive perspective and behavioral perspective that emphasized on people's control beliefs and depression claimed that locus of control and depression are associated (Hoeksema, Susan, Larson, & Grayson, 1999). This study also suggests that (Table 1) a negative relation exists between social support and depression. In many studies low social support have been associated with depression (Bettge et al., 2008). Furthermore, the current data (Table 2) suggested that social support plays a mediating role between locus of control, quality of life and depression across migraine patients. Which is consisted with the findings of a study which revealed that individuals with internal locus of control may be more optimistic about their ability to attain control on their health condition and stressful life situations (Hornby, Garry, & Seligman, 1991).

Social support plays a positive role in individual's health and quality of life (Brummett et al., 2005). Studies have found different impacts of social support on risk for depression. Low social support has been associated with depression in many studies (Denny et al., 2004; Lewinshon, Gotlib et al., 1997; Mcdonal et al., 2010). This study reveals that (Table 2) gender plays a moderating role between depression and social support among migraine patients. Male migraine patients scored less on social support variable than female migraine patients. Prior studies have reported that in general women tend to have more close friends throughout the life cycle than men. Furthermore, women get more help in return and women also tend to provide more emotion support to both men and women. Although, there is still discrepancies found

in gender differences in social support (Kessler, Leod, & Wethington, 1985). Prior studies also reported that women tend to devote more of themselves in life of the family members and friends as compared to men (Rambod & Rafaii, 2010). It is also apparent in this study that gender plays a moderating role between depression and quality of life among migraine patients. Male migraine patients reported better quality of life than female migraine patients. Previous studies reported that men usually score more in quality of life domain as compared to women in some studies. Though these findings lack empirical evidence (Chandra et al., 2009). The current data suggested that gender plays a moderating role between locus of control and social support among migraine patients. Previous studies have demonstrated that males tend to show more internal locus of control whereas females tend to have external locus of control. (Andreoletti, Zebrowitz & Lachman, 2001).

CONCLUSION

Summarizing the findings of this research, it may be concluded that migraine patients who were found to be internally controlled felt themselves as socially supported while those who had external locus of control felt that there life is not in their personal control and also felt alienated from the social environment. The quality of life of migraine patients was also found to be impaired. Migraine headache pain may undermine individual's wellbeing and may disrupt their quality of life. The disability caused by migraine also highlights the need to manage the distressing condition. Findings of this research may also be helpful in management of migraine related disabilities. It is also important to consider that migraine patients also have certain psychological issues and psychological co-morbidities such as depression, treating psychological issues will be efficacious in reducing migraine related disabilities and impaired quality of life.

The major limitation of this study was that the number of male migraine patients because less female migraine patients were registered at the hospital during the study period. Therefore the results of this study may be more applicable to the male migraine patients. This study was also limited by time and methodology. In this study there was not also enough data to draw strong explanations of results. In addition the findings of this study warrant further investigation in future. Furthermore, studies are recommended to study other factors associated with migraine disability such as anxiety, coping, and socio-economic status of patients.

REFERENCES

Andreoletti, C., Zebrowitz, L. A., & Lachman, M. E. (2001). Physical appearance and control beliefs in young, middle-aged, and older adults. *Personality and Social Psychology Bulletin*, *27*(8), 969-981.

Bokhari, F. A., Sami, W., Shakoori, T. A., Ali, S. A., & Qureshi, G. A. (2008). Clinical characteristics of 226 college-going female migraineurs in Lahore, Pakistan--Putting ICHD-2 to the road test. *Neuroendocrinology Letters*, *29*(6), 965.

Boes, C. J., & Capobianco, D. J. (2005). Chronic migraine and medication-overuse headache through the ages. *Cephalalgia*, *25*(5), 378-390.

Bettge, S., Wille, D. P. N., Barkmann, C., Schulte-Markwort, M., Ravens-Sieberer, U., & BELLA Study Group. (2008). Depressive symptoms of children and adolescents in a German representative sample: results of the BELLA study. *European child & adolescent Psychiatry*, *17*(1), 71-81.

Brummett, B. H., Mark, D. B., Siegler, I. C., Williams, R. B., Babyak, M. A., & Clapp, .N. E. (2005). Perceived social support as a predictor of mortality in coronary patients: effects of smoking, sedentary behavior, and depressive symptoms. *Psychosom Med,* 67(1):40-5.

Coughlin, A. M., Badura, A. S., Fleischer, T. D., & Guck, T. P. (2000). Multidisciplinary treatment of chronic pain patients: its efficacy in changing patient locus of control. *Archives of physical medicine and rehabilitation*, *81*(6), 739-740.

Chandra, P. S., Satyanarayana, V. A., Satishchandra, P., Satish, K. S., & Kumar, M. (2009). Do men and women with HIV differ in their quality of life? A study from South India. *AIDS and Behavior*, *13*(1), 110-117.

Dtripathi K. (2003). Migraine drug therapy. In: Essentials of Medical Pharmacology, 5th edition. p. 585-8.

Denny, S., Fleming, T., Clark, T. C., & Wall, M. (2004). Emotional resilience: Risk and protective factors for depression among alternative education students in New Zealand. *American Journal of Orthopsychiatry*, *74*(2), 137-149.

Ferrari MD. Migraine. Lancet 1998; 351:1043-1051.

Forgeron, P. A., King, S., Stinson, J. N., McGrath, P. J., MacDonald, A. J., & Chambers, C. T. (2010). Social functioning and peer relationships in children and adolescents with chronic pain: A systematic review. *Pain Research and Management*, *15*(1), 27-41.

Ghasemzadeh, A. (2011). Locus of control in Iranian university Student and its relationship with academic achievement *Procedia-Social and Behavioral Sciences*, *30*, 2491-2496.

Gottlieb, B. H., & Bergen, A. E. (2010). Social support concepts and measures. *Journal of psychosomatic research*, *69*(5), 511-520.

Gabbe, S. G., Niebyl, J. R., Galan, H. L., Jauniaux, E. R., Landon, M. B., Simpson, J. L., & Driscoll, D. A. (2012). *Obstetrics: normal and problem pregnancies*. Elsevier Health Sciences.

Hooke, G. R., & Page, A. C. (2002). Predicting outcomes of group cognitive behavior therapy for patients with affective and neurotic disorders. *Behavior modification*, *26*(5), 648-658.

Hornby, G., & Seligman, M. (1991). Disability and the family: Current status and future developments.

Hoeksema, N. S., Larson, J., & Grayson, C. (1999). Explaining the gender difference in depressive symptoms. *Journal of personality and social psychology*, *77*(5), 1061.

Ichikawa, M., & Natpratan, C. (2006). Perceived social environment and quality of life among people living with HIV/AIDS in northern Thailand [article]. Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv, 18(2), 128–132.

Koehler, P. J., & Van De Wiel, T .W. M. (2001). "Aretaeus on migraine and headache," *Journal of the History of the Neurosciences*, vol. 10, no.3, pp.253–261.

Kessler, R. C., McLeod, J. D., & Wethington, E. (1985). The costs of caring: A perspective on the relationship between sex and psychological distress. In *Social support: Theory, research and applications* (pp. 491-506). Springer Netherlands.

Lipton, R. B., Hahn, S. R., Sheftell, F. D., Cady, R. K., Eagan, C. A., Simons, S. E., & R.K. Cadyetal. (2008). Healthcare provider–patient communication and migraine assessment: results of the American Migraine Communication Study, phase II. *Current medical research and opinion*, *24*(6), 1711-1718.

Lipton, R. B., Stewart, W. F., Diamond, S., Diamond, M. L., & Reed, M. (2001). Prevalence and burden of migraine in the United States: data from the American Migraine Study II. *Headache: The Journal of Head and Face Pain*, *41*(7), 646-657.

Lewinsohn, P. M., Seeley, J. R., & Gotlib, I. H. (1997). Depression-related psychosocial variables: are they specific to depression in adolescents? *Journal of abnormal psychology*, *106*(3), 365.

Mahrer, I. R., Jaggi, S., Bonomo, A., Hediger, H., Eggenschwiler, P., & Kramer, G. (2013). Quality of life in adult patients with epilepsy and their family members. *Seizure*, 22:128–35.

McDonald, K. L., Bowker, J. C., Rubin, K. H., Laursen, B., & Duchene, M. S. (2010). Interactions between rejection sensitivity and supportive relationships in the prediction of adolescents' internalizing difficulties. *Journal of Youth and Adolescence*, *39*(5), 563-574.

Noushad, Shamoon, Ahmed, S., Sheikh, T., & Khan, S. (2013). Misconceptions of headache and migraine in young Pakistani male sufferers. *Pak. J. Health Research*, *1*(1), 12-16.

Natoli, J. L., Dean, B., Manack, A., Butler, Q., Turkel, C. C., & Stovner, L. (2010). Global prevalence of chronic migraine: *a systematic review*. Cephalalgia , 30:599-609.

Paskulin, L. M., & Vianna, L. A. (2007). Socio demographic profile and self-referred health conditions of the elderly in a city of Southern Brazil. *Revista de Saúde Pública*, *41*(5), 757-768.

Peacock, E. J., & Wong, P. T. P. (1996). Anticipatory stress: The relation of locus of control, optimism, and control appraisals to coping. *Journal of Research in Personality*, *30*(2), 204-222.

Rothrock, J., Lopez, I., Zweilfer, R., Andress-Rothrock, D., Drinkard, R., & Walters, N. (2007). Borderline personality disorder and migraine. *Headache: The Journal of Head and Face Pain*, *47*(1), 22-26.

Rutberg, S., & Öhrling, K. (2012). Migraine–more than a headache: women's experiences of living with migraine. *Disability and rehabilitation*, *34*(4), 329-336.

Rambod, M., & Rafii, F. (2010). Perceived social support and quality of life in Iranian hemodialysis patients. *Journal of Nursing Scholarship*, *42*(3), 242-249.

Stovner, L. J., Linde, M., Gravdahl, G. B., Tronvik, E., Aamodt, A. H., Sand, T., & Hagen, K. (2013). A comparative study of candesartan versus propranolol for migraine prophylaxis: A randomised, triple-blind, placebo-controlled, double cross-over study. *Cephalalgia*, 0333102413515348.

Theofilou, P. (2011). Quality of life in patients undergoing hemodialysis or peritoneal dialysis treatment. *Journal of clinical medicine research*, *3*(3), 132-138.

Wiendels, N. J., Neven, A. K., Rosendaal, F. R., Spinhoven, P., Zitman, F. G., Assendelft, W. J., & Ferrari, M. D. (2006). Chronic frequent headache in the general population: prevalence and associated factors. *Cephalalgia*, *26*(12), 1434-1442.

Wilhelm, K., Roy, K., Mitchell, P., Brownhill, S., & Parker, G. (2002). Gender differences in depression risk and coping factors in a clinical sample. *Acta Psychiatrica Scandinavica*, *106*(1), 45-53.