

A Cross Sectional Study on Level of Migraine Disability and Quality of Life

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ABSTRACT

Introduction: Migraine is a mind essential headache disorder described by intermittent scenes of moderate to serious throbbing cerebral pain or a beating sensation enduring 4-72 hours, frequently one-sided, regularly connected with cranial autonomic symptoms and symptoms of cutaneous allodynia. The agony is regularly progressively extraordinary in the front temporal and ocular regions before spreading to the parietal and occipital territories.

Objective: The main purpose of this research is to estimate the association of migraine level and quality of life.

Method: A cross sectional study was conducted on a local headache clinic, Bangabandhu Sheikh Mujib Medical University, Dhaka on 300 patients scheduled for appraisal of their problems regarding migraine. The study duration was from June 2018 to November 2018.

Results: After numerous information and examination investigation it was found MSQ score for grading migraine is significantly associated with the level of migraine.

Conclusion: The study concludes that there is a significant association of migraine level with the quality of life. Thusly it is necessary to conduct extensive studies on migraine to get better solution for the patients to control their pain level.

Keywords: Migraine, Quality of Life, MSQ Score.

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INTRODUCTION

Migraine is a mind essential headache disorder described by intermittent scenes of moderate to serious throbbing cerebral pain or a beating sensation enduring 4-72 hours, frequently one-sided, regularly connected with cranial autonomic symptoms and symptoms of cutaneous allodynia.

The agony is regularly progressively extraordinary in the front temporal and ocular regions before spreading to the parietal and occipital territories. Any locale of the head or face might be influenced, including the parietal district, the upper or lower jaw or teeth, the malar eminence, and the upper anterior neck. Sometimes, migraine attacks are corresponding with visual or sensory symptoms—all things considered known as an aura—that emerge frequently before the head torment yet that may happen amid or a while later.

Headache is most basic in ladies and has a solid hereditary segment. In youngsters, assaults might be shorter-enduring, ordinarily, including ecological affectability, queasiness, and unsteadiness.

Sickness and spewing may confine a patient's capacity to utilize oral medications amid a headache. Individuals with migraine are at expanded hazard for an assortment of other medicinal and mental conditions, including cardiovascular disease and mood disorders. Migraineurs ought to be advised to diminish modifiable cardiovascular hazard factors, including hypertension, diabetes, smoking, and obesity, which are additionally expanded in migraineurs.¹

Many epidemiological investigations have reported that migraine has high commonness and financial and individual effects. In this way, when the assault closes, many experience the ill effects of a sort of migraine anticipatory anxiety, where they stress when the following assault will all of a sudden seem to wreck their arrangements for a productive, upbeat day. In the Global Burden of Disease Study 2010, it was positioned as the third most pervasive issue on the planet. In GBD2015, it was positioned the third-most astounding reason for handicap worldwide in the two guys and females younger than 50 years.²

OBJECTIVES

Main Objective

The main purpose of this research is to estimate the association of migraine level and quality of life.

Specific Objectives

- Gauging the quality of life of the patients.
- Gauging the level of Migraine among the patients.
- Appraising the effects of migraine on patients' quality of lives.

METHOD

Study Design

A cross-sectional study was carried out to assess the disability and quality of life of migraine patients. To assess the level of disability and quality of life among migraine patients, it was necessary to interact with migraine patients through a question answer session. As it is one-time question answer session, within a short period of time, the study demanded cross sectional study. In this study, disability and quality of life were measured at same point in time.

Inclusion Criteria

- Has come to the clinic to get treatment for Migraine
- Has the willingness to be part of the study
- 18 - 60 years of age

Exclusion Criteria

- Samples continuously abusing sedatives, and illegal drugs
- Pregnant women
- Patients whom have known psychological problems

Sample Size

To determine the sample size, following formula was considered as appropriate for study design:

$$n = \frac{z^2pq}{d^2}$$

n=Calculated sample size;

Z=Standard normal deviate 1.96 at 95% confidence interval; p=the "p" is proportion of impaired quality of life and disability among migraine patients.

q=1-p; d=Allowable error=0.05

Therefor p=50% =0.50

q=1-p =0.50

So calculated value= 384

Assuming 10% of non-response rate, the estimated final sample size was 384/0.9 =426. But due to limitation of time, finally data were collected from 300 respondents.

Sampling Technique

Headache clinic, Bangabandhu Sheikh Mujib Medical University, Dhaka selected purposively. Participants were selected in the headache clinic who attended for outdoor consultation in BSMMU and collecting the information about the disability and quality of life among known case of migraine.

Study Area

- A local headache clinic, Bangabandhu Sheikh Mujib Medical University, Dhaka
- A cross section study was conducted
- 300 patients scheduled for appraisal of their problems regarding migraine
- The study duration was from June 2018 to November 2018.

Study Procedure

- The patients of the study were asked to be the part of the study;
- The level or grade of the migraine was identified among the patients;
- A survey was conducted on their quality of life;
- A MSQ score was deducted and compared to their quality of life data;

Data Collection Technique

Data were collected by face-to-face interview, of migraine patients using structured questionnaire constructed by migraine disability assessment scale (MIDAS) and migraine specific quality of life (MSQ). Interview was taken at BSMMU, headache clinic of the participant ensuring the privacy and confidentiality as far as possible. Before the interview, the detail of the study was explained to each eligible respondent and written informed consent was taken.

Data Processing and Analysis

After completion of data collection, each question was checked for completeness. Data were entered into computer using SPSS version 21. After frequency run data were cleaned and after thorough cleaning and editing of data, an analysis plan was structured in relevance to study objectives. Distribution was checked for normality. Construction of new variables and recoding of some variables were done.

Data analysis began with descriptive analysis. Means and standard deviations were calculated for continuous variables while frequencies and percentages were calculated for categorical variables, simultaneously to see the relationship and statistical significance Chi-Square test, ANOVA test and Pearson product-moment correlation test done.

Table 1: Distribution of the Samples by Occupation

Occupation	Number	Percentage
Unemployed	7	2.3
Retired	2	0.6
Housewife	140	46.7
Student	70	23.3
Service holder	38	12.7
Businessman	14	4.7
Labourer	13	4.3
Others	16	5.3
Total	300	100

Table 2: MSQ Score

Migraine disability	MSQ (Mean ± SD)	F	p-value
MSQ score – Role restrictive			
Grade I	53.0 ± 10.4	4.041	0.008
Grade II	53.7 ± 12.1		
Grade III	56.7 ± 9.1		
Grade IV	58.5 ± 8.0		
MSQ score – Role preventive			
Grade I	51.2 ± 12.6	2.165	0.091
Grade II	51.3 ± 18.5		
Grade III	53.0 ± 12.1		
Grade IV	55.8 ± 10.8		
MSQ score- Emotional function			
Grade I	35.6 ± 26.5	3.934	0.008
Grade II	44.5 ± 29.8		
Grade III	49.6 ± 17.8		
Grade IV	49.1 ± 15.4		
MSQ total score			
Grade I	48.7 ± 10.3	4.335	0.004
Grade II	51.1 ± 14.5		
Grade III	54.1 ± 10.1		
Grade IV	55.7 ± 8.7		
F test done			

Table 3: Migraine Disability Grading

Migraine Disability	Migraine Disability	Mean Difference	p-value
Grade I	Grade II	-2.3	0.925
	Grade III	-5.4	0.150
	Grade IV	-6.9	0.031
Grade II	Grade I	2.3	0.925
	Grade III	-3.0	0.786
	Grade IV	-4.6	0.474
Grade III	Grade I	5.4	0.150
	Grade II	3.0	0.786
	Grade IV	-1.5	0.585
Grade IV	Grade I	6.9	0.031
	Grade II	4.6	0.474
	Grade III	1.5	0.585

RESULTS

Majority of the respondents were housewives (46.8%), followed by service holders (13.0%) and businessmen (5.1%, Table 1).

There is an association between migraine disability grading and migraine specific quality of life. MSQ role restrictive score increased with increase of migraine grading which was statistically significant ($p=0.008$). Role preventive score also increased with increase of migraine grading; however, it was not statistically significant ($p=0.091$). Association between migraine disability grading and emotional function of MSQ score was statistically significant ($p=0.008$). Significant relationship was found between grading of migraine disability and total MSQ score ($p=0.04$). (Table 2 and 3)

DISCUSSION

Personal satisfaction alludes to a person's evaluation of their general prosperity and position in life as perceived inside the setting of their way of life, objectives, esteem frameworks, and concerns.³ HRQoL is a subset of generally speaking personal satisfaction that includes a person's wellbeing state, utilitarian status (both physically and rationally), just as the person's general well-being.⁴

The measurable examination demonstrated the relationship between migraine disability grading and headache explicit personal satisfaction. MSQ role restrictive score expanded with increment of migraine grading which was statistically significant ($p=0.008$). Job preventive score likewise expanded with increment

of headache evaluating; be that as it may, it was not statistically significant ($p=0.091$). Relationship between migraine disability grading and emotional function of MSQ score was statistically significant ($p=0.008$). Noteworthy relationship was found between grading of migraine disability and absolute MSQ score ($p=0.04$). This outcome can be of significant assistance for clinicians in the administration of migraine headache and consequently diminish migraine disability and improve personal satisfaction of migraineurs.

Notwithstanding HRQoL, an elective method for estimating the weight of migraine centers around action constraints or transitory disability. Handicap alludes to the results of disease on the capacity to work and capacity in different settings and roles.⁴ Headaches has noteworthy social, mental, and financial effects. For instance, a Canadian populace review of headache found that half of migraine sufferers ended ordinary exercises amid their assaults and very nearly 33% required bed rest and in over 70% of the cerebral pain sufferers in this study, relational connections were impaired⁵. Different investigations have estimated incapacity by assessing lost time because of migraine, including both failures to get things done just as decreased effectiveness.⁶ Notwithstanding immediate human services costs, the turmoil results in loss of 20 million working days in England. The financial yearly effect of migraines is extensive and has been evaluated at €27 billion in European nations. The roundabout expenses of migraine surpass the direct costs.⁷

CONCLUSION

The study concludes that there is a significant association of migraine level with the quality of life. Thusly it is necessary to conduct extensive studies on migraine to get better solution for the patients to control their pain level.

REFERENCES

1. Chandra, P. & Arulmozhi, V. 2017. Women with Migraine Having High Risk of Hypertension, Heart Disease and Stroke: A Quick Survey. *International Journal on Recent and Innovation Trends in Computing and Communication*, 5, 1161–65.

2. Vos, T., Flaxman, A. D., Naghavi, M., Lozano, R., Michaud, C., Ezzati, M., Shibuya, K., Salomon, J. A., Abdalla, S. & Aboyans, V. 2012. Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*, 380, 2163-96.
3. Silberstein, S. D., Lipton, R. B. & Dalessio, D. J. 2001. *Wolff's headache and other head pain*, Oxford University Press.
4. Tarlov, A. R., Ware, J. E., Greenfield, S., Nelson, E. C., Perrin, E. & Zubkoff, M. 1989. *The Medical Outcomes Study: an application of methods for monitoring the results of medical care*. *Jama*, 262, 925-930.
5. Edmeads, J., Findlay, H., Tugwell, P., Pryse-Phillips, W., Nelson, R. & Murray, T. 1993. Impact of migraine and tension-type headache on life-style, consulting behaviour, and medication use: a Canadian population survey. *Canadian Journal of Neurological Sciences*, 20, 131-137.
6. Von Korff, M., Stewart, W. F., Simon, D. J. & Lipton, R. B. J. N. 1998b. Migraine and reduced work performance A population-based diary study. 50, 1741-1745.
7. Solomon, G. & Price, K. 1997. Burden of migraine. *Pharmacoeconomics*, 11, 1-10.

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