

The Burden of Migraine among the Geriatric Population in Taif City, Saudi Arabia

Abdulrahim Ali Alghamdi^{1*}, Adel Obaidallah Aloufi²

¹Senior Registrar of Family Medicine, Ministry of Health, KSA

²Consultant of Family Medicine, Ministry of Health, KSA

ABSTRACT

Background: Migraine headache is a chronic condition with several comorbidities. This study aims to assess the burden of migraine among the elderly in Taif city, Saudi Arabia, as well as to assess the effect of sociodemographic factors on migraine-specific quality of life among patients with migraine.

Methods: The study adopted a cross-sectional study design and was conducted in several primary healthcare centers (PHCs) in Taif, Saudi Arabia. We used the Arabic Migraine Screen Questionnaire (MSQ) for the diagnosis of migraine. Participants who were diagnosed with migraine using the MSQ were assessed using the Migraine-specific Quality of Life questionnaire (MS-QoL). Data were managed and analyzed using the Statistical Package for Social Sciences (SPSS) version 26.

Results: The study included 75 participants. Males constituted 62.7% of participants. Age ranged from 65 to 71 years, whereas participants aged 65 to 69 constituted 56%. The majority (88%) resided in an urban area. Using the Arabic translation of the Migraine Screen Questionnaire revealed that 30.7% of participants were diagnosed with migraine. Among participants diagnosed with migraine ($n=23$), there was a significant association between MS-QoL and age ($p=0.005$), marital status ($p=0.248$), educational level ($p=0.000$), work status ($p=0.000$), and presence of chronic diseases ($p=0.000$).

Conclusion: Our research found that migraine is more common in female elderly people than in male elderly. Older age groups, inhabitants of rural regions, widows, illiterates, participants with chronic conditions, and individuals who are still working all had a worse migraine-specific quality of life scores.

Key words: Migraine, Headache, Polypharmacy

HOW TO CITE THIS ARTICLE: Abdulrahim Ali Alghamdi, Adel Obaidallah Aloufi, The Burden of Migraine among the Geriatric Population in Taif City, Saudi Arabia, J Res Med Dent Sci, 2022, 10 (6):237-240.

Corresponding author: Abdulrahim Ali Alghamdi

e-mail ✉: dr.huda1992@outlook.com

Received: 02-May-2022, Manuscript No. JRMDs-22-66913;

Editor assigned: 04-May-2022, **PreQC No.** JRMDs-22-66913 (PQ);

Reviewed: 19-May-2022, QC No. JRMDs-22-66913;

Revised: 26-May-2022, Manuscript No. JRMDs-22-66913 (R);

Published: 02-June-2022

INTRODUCTION

If left untreated, a migraine headache can continue for up to 72 hours. This form of headache affects just one side of the head (unilaterally), causes moderate to severe pain, and may be made worse by physical exertion. Migraine headaches are often accompanied by nausea, vomiting, and light sensitivity. Before or during a migraine headache episode, some women may suffer an aura (for example, visual loss) [1]. "Migraine," "headache," and "sick headache" are all terminology used to characterize a migraine headache. The words "migraine" and "headache" are used to describe migraine

headaches throughout this dissertation.

Migraine headache is a chronic condition with several comorbidities. The social expenses are raised as a result of the headaches and comorbidities. According to research, nurses with migraine headaches have a reduced quality of life as a result of their headaches [2]. Patients with migraines visit the emergency room more frequently than non-migraine patients, and they spend more money on medical care [3]. Other disorders that coexist with migraine headaches have been discovered by researchers. Depression is one such condition that frequently occurs alongside migraine and can be exacerbated when healthcare providers fail to recognize migraine headaches [4,5]. Because migraine headache is a serious disease with potential comorbidities for those who suffer from it, and because migraine headache is linked to higher societal expenses, nurses must have a better understanding of the whole experience of these patients.

Migraine commonly begins in infancy and peaks during

puberty (about 12 years for boys and 15 years for girls [6], although it can begin at any age [7], a tiny fraction of patients in their sixth, seventh, and eighth decades of life report symptoms [8]. According to research [9,10], migraine is most active in the third and fourth decades of life, with the majority of older chronic migraine patients reporting a migraine onset before the age of 50 [11-13]. Importantly, given the global increase in life expectancy, migraine in the elderly is expected to become a much greater personal and public health problem in the next 40 years, since management is likely to be muddled by other health concerns and their related polypharmacy.

STUDY AIM

The goal of this study is to determine the prevalence of migraine headaches among the elderly in Taif, Saudi Arabia.

METHODOLOGY

Study design

This study is an analytical cross-sectional study.

Study setting

The study was conducted in Primary Healthcare setting in Taif city, Saudi Arabia.

Study population

The study included Saudi subjects aged 65 years or more visiting several PHCs and agreed to participate in the study after receiving orientation and an explanation about the objectives of the study.

Sample size

The minimum sample size for this study was decided according to the formula:

$$n = Z^2 \times P \times Q / D^2$$

Where n: calculated sample size, Z: The z-value for the selected level of confidence=1.96, P: The assumed proportion of the elderly population with migraine=50%=0.5, Q: (1-P)=0.5, and D: The maximum acceptable error [precision level]=0.05. The estimated sample size was at least 65 individuals.

Data collection tools

Data was collected using a questionnaire that constituted sociodemographic factors, the Arabic translated Migraine Screen Questionnaire (MSQ) [14], and the Migraine-Specific QOL questionnaire (eprovideTM, 2018), which consists of 14 items, which was used to assess the quality of life associated with migraine.

Data collection method

The data collection form was distributed among eligible participants and their family companions to be filled in with assistance by the authors whenever needed.

Data management plan

The collected data were entered into a Microsoft Excel

sheet and transferred to the Statistical Package for Social Sciences (SPSS) version 26 for further analysis. Descriptive analysis was performed using frequencies, percentages, means and standard deviations. Inferential statistics were done using the Kruskal-Wallis test and Mann-Whitney test, as the quality of life scores were not normally distributed. P-values that are equal to or less than 0.05 were regarded as statistically significant.

Ethical considerations

The questionnaire began with a short description of its purpose and goal, as well as a reminder that participation was entirely optional. Because this was observational research involving human beings, individuals who said "yes" to participating gave their informed consent. Names, dates of birth, and residences were not collected in the questionnaires. All of the responses were kept confidential and secure.

RESULTS

The data collection form received 84 responses, of which 75 were complete. Males constituted 62.7% of participants. Age ranged from 65 to 71 years, whereas participants aged 65 to 69 constituted 56%. Only 12% resided in a rural area, and the majority (88%) resided in an urban area. Less than half (42.7%) of participants held a bachelor's degree or higher, and 81.3% were not working. Nearly half of the participants (48%) reported having current chronic diseases (Table 1).

We used the Arabic translation of the Migraine Screen Questionnaire by which 30.7% of participants were diagnosed with migraine (Table 2).

MS-QoL results among participants with migraine are shown in Table 3. There was a significant association between MS-QoL and age ($p=0.005$), marital status ($p=0.248$), educational level ($p=0.000$), work status ($p=0.000$), and presence of chronic diseases ($p=0.000$).

Table 1: Sociodemographic characters of participants (n=75).

Parameter		Freq. (%)
Age, y	65 -	42 (56.0%)
	70 -	33 (44.0%)
Sex	Female	28 (37.3%)
	Male	47 (62.7%)
Type of accommodation	Rural	9 (12%)
	Urban	66 (88%)
Marital status	Married	60 (80%)
	Divorced	7 (9.3%)
	Widowed	8 (10.7%)
Highest educational degree achieved	Illiterate	6 (8%)
	Primary education	4 (5.3%)
	Intermediate education	8 (10.7%)
	Secondary education	25 (33.3%)
Work status	Bachelor degree or higher	32 (42.7%)
	Retired	61 (81.3%)
Positive history of current chronic diseases	Businessperson	14 (18.7%)
	No	39 (52%)
	Yes	36 (48%)

Table 2: Migraine screen questionnaire items and diagnosis among participants (n=75).

Migraine Screen Questionnaire (MSQ) Items		Freq. (%)
Do you suffer from frequent headaches?	No	58 (77.3%)
	Yes	17 (22.7%)
Have you had a headache that lasted more than 4 hours?	No	40 (53.3%)
	Yes	35 (46.7%)
Do you feel a headache accompanied by nausea?	No	52 (69.3%)
	Yes	23 (30.7%)
Are you bothered by light or loud sounds during a headache attack?	No	29 (38.7%)
	Yes	46 (61.3%)
Does headache affect your physical or mental activity?	No	23 (30.7%)
	Yes	52 (69.3%)
MSQ Migraine diagnosis	No	52 (69.3%)
	Yes	23 (30.7%)

Table 3: MS-QoL in association with participants' sociodemographic factors (n=23).

Parameter	N	Migraine-Specific QoL Score	P-value
Age, y	65 -	78.57 ± 0 (78.57-78.57)	0.005
	70 -	61.76 ± 23.77 (33.33-88.1)	
Sex	Female	66.15 ± 21.63 (33.33-88.1)	-
	Rural	64.29	0.248
Type of accommodation	Urban	66.54 ± 23.9 (33.33-88.1)	
	Marital status	Married	71.43 ± 7.53 (64.29-78.57)
Divorced		88.1	
Widowed		39.8 ± 17.1 (33.33-78.57)	
Highest educational degree achieved	Illiterate	33.33 ± 0 (33.33-33.33)	0
	Secondary education	88.1	
	Bachelor degree or higher	77.08 ± 9.79 (64.29-88.1)	
Work status	Retired	76.19 ± 18.72 (33.33-88.1)	0
	Businessperson	50.53 ± 16.31 (33.33-64.29)	
Positive history of current chronic diseases	No	82.9 ± 4.97 (78.57-88.1)	0
	Yes	50.79 ± 19.38 (33.33-88.1)	

In our study, all subjects diagnosed with migraine were females (100%). According to the MS-QoL, the older group experienced a lower life quality score (61.8 ± 23.8) than the younger (78.6). The widowed group experienced the lowest score of all groups (33.3). Participants with chronic diseases experienced a lower QoL score (50.8 ± 19.4) than participants without (82.9 ± 4.9).

DISCUSSION

Migraine is the second most frequent headache disorder in older persons, following tension-type headaches, with a one-year incidence of roughly 10% [7,15].

This cross-sectional study aimed to assess the burden of migraine among the elderly in Taif, Saudi Arabia, as well as to assess the effect of sociodemographic factors on migraine-specific quality of life among patients with migraine. The study included 75 participants, of which 30.7% were diagnosed with migraine using the screening tool.

All migraine-positive participants in our study were females (100%). In addition, there were almost three times subjects suffering from migraine in the older age group than in the younger. This is consistent with the literature. The clinical features of migraine alter with

age [16] and as the number of comorbidities rises [13]. In a study of 260 migraine patients ranging in age from 3 to 69 years, significant variations in clinical aspects were found as patients became older [17]. From infancy to maturity, the proportion of males having migraines declined dramatically. The length of headaches, unilateral discomfort, pulsing sensations, light sensitivity, and noise sensitivity increases with age in females.

Our results show a significant decline in MS-QoL among participants who are still working than those who are retired (p=0.000). The aggravation of headache with physical exercise, on the other hand, is reduced with age [17]. In the elderly, neck discomfort is associated with acute migraine headaches [18]. Other research has shown that as patients become older, autonomic symptoms such as tachycardia, sweating, dry mouth, and face flush increase, whereas sensory sensitivity, nausea, and vomiting decrease [12]. As a result, migraine therapy choices for older people are complicated and difficult, which is exacerbated by the exclusion of older patient groups (>65 years) from the bulk of migraine clinical studies [19].

Chronic headaches (chronic migraine, chronic tension headaches, and drug overuse headaches) afflict 5 to 22% of the aged population, according to studies, and are more common in women [12,20]. Headaches

affect 14.9 percent of female patients and 6.1 percent of male patients who see their medical practitioner in Australia [21]. Headaches are the tenth most frequent symptom among elderly women and the fourteenth most common symptom among senior men worldwide [22]. Headache has the potential to degrade the quality of life and interfere with daily activities at home and in the community, resulting in a considerable burden of impairment [23].

Although specific primary headaches, such as hypnic headache and primary cough headache, are more common in the elderly, the frequency and incidence of primary headaches declines with age [11-13].

CONCLUSION

Our study revealed that migraine is more prevalent among female elderly than in comparable populations. Lower migraine-specific quality of life scores was evident among older age groups, residents of rural areas, widows, and illiterates, participants with chronic diseases and participants who are still working.

ACKNOWLEDGMENT

The authors would like to thank Abdalla Mohamed Bakr Ali, Faculty of Medicine, Sohag University for his contribution to the statistical analysis.

AUTHOR CONTRIBUTIONS

Authors contributed equally in study implementation as well as data collection and manuscript writing.

FUNDING

This study has not received any external funding.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interests.

REFERENCES

1. <https://n.neurology.org/content/71/18/1462>
2. Durham CF, Alden KR, Dalton JA, et al. Quality of life and productivity in nurses reporting migraine. *Headache: Journal Head Face Pain* 1998; 38:427-435.
3. Elston Lafata J, Moon C, Leotta C, et al. The medical care utilization and costs associated with migraine headache. *J Gen Intern Med* 2004; 19:1005-1012.
4. Kolotylo CJ, Broome ME. Exploration of migraine pain, disability, depressive symptomatology, and coping: A pilot study. *Health Care Women Int* 2000; 21:203-218.
5. Wikberg, A., Jansson, L., & Lithner, F. Women's experience of suffering repeated severe attacks of acute intermittent porphyria. *J Adv Nurs* 2000; 32:1348-1355.
6. Goadsby PJ. Migraine: Diagnosis and management. *Int Med J* 2003; 33:436-442.
7. Haan J, Hollander J, Ferrari MD. Migraine in the elderly: A review. *Cephalalgia* 2007; 27:97-106.
8. Stewart WF, Lipton RB, Celentano DD, et al. Prevalence of migraine headache in the United States: Relation to age, income, race, and other sociodemographic factors. *JAMA* 1992; 267:64-69.
9. Burch R, Rizzoli P, Loder E. The prevalence and impact of migraine and severe headache in the United States: Figures and trends from government health studies. *Headache J Head Face Pain* 2018; 58:496-505.
10. Burch R, Rizzoli P, Loder E. The prevalence and impact of migraine and severe headache in the United States: Updated age, sex, and socioeconomic-specific estimates from government health surveys. *Headache J Head Face Pain* 2021; 61:60-68.
11. Lisotto C, Mainardi F, Maggioni F, et al. Episodic hypnic headache?. *Cephalalgia* 2004; 24:681-685.
12. Martins KM, Bordini CA, Bigal ME, et al. Migraine in the elderly: A comparison with migraine in young adults. *Headache J Head Face Pain* 2006; 46:312-316.
13. de Rijk P, Resseguier N, Donnet A. Headache characteristics and clinical features of elderly migraine patients. *Headache J Head Face Pain* 2018; 58:525-533.
14. Alaqeel A, Alaqeel S, Andijani A, et al. Validity and reliability of an arabic version of the migraine screen questionnaire in the primary care setting for identifying hidden migraine. *Int J Med Dev Countries* 2011; 5:906-910.
15. Prencipe M, Casini AR, Ferretti C, et al. Prevalence of headache in an elderly population: Attack frequency, disability, and use of medication. *J Neurol Neurosurg Psychiatr* 2001; 70:377-381.
16. Starling AJ. Diagnosis and management of headache in older adults. In *Mayo Clinic Proceedings* 2018; 93:252-262.
17. Wöber-Bingöl C, Wöber C, Karwautz A, et al. Clinical features of migraine: A cross-sectional study in patients aged three to sixty-nine. *Cephalalgia* 2004; 24:12-17.
18. Kelman L. Pain characteristics of the acute migraine attack. *Headache J Head Face Pain* 2006; 46:942-953.
19. Landy S. Migraine throughout the life cycle: Treatment through the ages. *Neurology* 2004; 62:2-8.
20. Camarda R, Monastero R. Prevalence of primary headaches in Italian elderly: Preliminary data from the zabut aging project. *Neurol Sci* 2003; 24:122-124.
21. Stark RJ, Ravishankar K, Siow HC, et al. Chronic migraine and chronic daily headache in the Asia-Pacific region: A systematic review. *Cephalalgia* 2013; 33:266-283.
22. Sharma TL. Common primary and secondary causes of headache in the elderly. *Headache J Head Face Pain* 2018; 58:479-484.
23. Feleppa M, Fucci S, Bigal ME. Primary headaches in an elderly population seeking medical care for cognitive decline. *Headache J Head Face Pain* 2017; 57:209-216.