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# Prevalence and impact of primary headache on job performance and quality of life among physician at King Salman Armed Forces Hospital (KSAFH) in Tabuk

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## ABSTRACT

*Background*: Headache is a common health problem among physicians; it could leads to adversative influences on their work performance and quality of life. *Objective*: The study aimed to investigate the prevalence and influence of primary headache on job performance and quality of life of physicians at King Salman Armed Forces Hospital (KSAFH) in Tabuk. *Methods*: A descriptive cross-sectional study was conducted from December 1st2020 to February 28th2021. Well-designed standardized questionnaire was used for data collection. Collected data was analyzed using SPSS software program, Ver. 24. *Results*: about 163 physicians from different departments were included, of whom 68% were males, while 32% were females, only 4% of participants from Emergency, 39% from OPD and 56% from wards, most of participants were specialized either in Surgery (15%), Medicine (23%), pediatric (12%) or OBs. (8%), while 43% of participants from other specialties. This study indicated that the prevalence of primary headache was 86% in the last three months, the intensity of the headache either mild (46%) or moderate (53%). The present study also found that the headache either pulsating / throbbing (39%) or dull / pressing (61%). *Conclusion*: This study revealed that there was no statistical association between occurrence of headache, working department and specialty, while there was statistical association between occurrence of headache and gender.

**Keywords:** Prevalence; Impact; Headache; Physician; Tabuk; Saudi Arabia

## 1. INTRODUCTION

The headache is one of the most common neurological disorders and ranks the third cause of years lost due to pain and disability that occur in primary headache disorders called cluster, migraine, tension-type headache. The

headache can occur due to secondary causes such as medication-overuse headache (WHO, 2016), so the headache is classified regarding the causes to primary headache that is daily, benign and not caused by underlying disorders and secondary headache is caused by underlying problems such as head injuries and space occupying lesions (e.g. bleeding, tumors, etc.), (Goadsby et al., 2012). According to Global Burden of Disease Study 2013, headache ranked the third cause of years lost due to disability (YLD) (Global Burden of Disease Study 2013 Collaborators, 2015). The most common type of headaches is primary headache (more than 90%), and mostly episodic tension-type headache. Roughly everyone is suffering from this type of headache at least once in his life. In Saudi Arabia, the headache prevalence is 63% affecting mainly females and younger age. The tensionype headache has the highest type prevalence (32%) and is considered as the common cause of the physician visits and work absenteeism. It is followed by the migraine headache (2.6-5%), (Kessler et al., 2010 & Al Jumah et al., 2020). The medical and paramedical staff is exposed to high work stress that can let them suffer from psychosomatic symptoms such as primary headache. The headache disabilities have an actual effect on job performance, costs and outcomes (Lin et al., 2007). Some studies found that 31% of migraine headache sufferers were losing one workday in a period of 3 months, and absent an ordinary of 10.7 days/year for the sake of headache symptoms. The absenteeism due to migraine headache costs annually $13 billion dollars and $1,165 dollars for each individual in the USA (Lipton et al., 2001).

There is still a lack of sufficient studies to investigate the primary headache prevalence and its impact on the job performance of medical and paramedical staff in the emergency departments.

Headache continues to be a frequent cause of emergency department (ED) use, accounting for 2% of all visits to U.S. EDs (Goldstein et al., 2008). In these visits, the most commonly diagnosed are the primary headache disorders, most often migraine or tension-type headache (Bigal et al., 2000 & Friedman et al., 2007). The primary headache disorders are a collection of chronic illnesses characterized by repeated acute exacerbations, sometimes warranting an ED visit. Diagnosing or classifying the individual headache can be challenging, but allows appropriate treatment to be targeted to the patient (Luda et al., 1995). Providing a diagnosis for every patient is easier said than done. Up to one-third of patients who present to an ED with headache cannot be assigned a specific diagnosis, despite a thorough questionnaire-based assessment (Friedman et al., 2007). An ED history and physical exam should focus on excluding secondary causes of headache, then determining which therapeutic agent is most appropriate. Physicians should be vigilant not to dismiss a diagnosis of migraine because of the presence of a coexisting illness such as sinusitis (Detsky et al., 2006).

**Study Objectives**

To determine the prevalence and severity of the primary Headache, identify its impact on the quality of life and to show if there are statistically significant association between the occurrence of headache and independent variables such as; gender, specialty, and working department

## 2. SUBJECTS AND METHODS

**Study Design**

This descriptive cross-sectional study was developed to determine the prevalence and impact of primary headache on job performance and quality of life among physician at King Salman Armed Forces Hospital (KSAFH) in Northwestern region, Tabuk, Kingdom of Saudi Arabia, during the period from December 1st2020 to February 28th 2021.

**Data collection**

A well-designed standardized questionnaire was used for data collection. The questionnaire contains three parts. The first part collects the socio-demographic data (age, gender, marital status, specialty, working dept. body mass index (BMI), physical activity, smoking and level of income. The second part includes questions about the characteristics of headache. The third part assesses the impact of headache on job performance by using headache impact test (HIT-6) (Ware et al., 2003).

The HIT-6 was adapted from the longer, Internet-based HIT (Ware et al., 2003), as a short pencil-and-paper survey assessing the impact of headache on participants' lives in the past 4 weeks. It is a brief instrument covering a broad content of headache-related HRQL across the following domains: pain, social functioning, role functioning, vitality, cognitive functioning, and psychological distress. Each item is answered on a 5-point Likert-scale (6 = never; 8 = rarely, 10 = sometimes, 11 = very often; 13 = always). The currently recommended scoring of the HIT-6 was derived to approximate the total score obtained from the larger battery of items, using results from item response theory (Kosinski et al., 2003). The final score is obtained from simple summation of the six items. The HIT-6 total score ranges between 36 and 78, with larger scores reflecting greater impact. Four groups have been derived to aid

in the interpretation of HIT-6 scores: scores ≤ 49 represent little or no impact, scores between 50 and 55 represent some impact, scores between 56 and 59 represent substantial impact, and scores ≥ 60 indicate severe impact (Yang et al., 2011).

**Sampling techniques and sample size**

In this study we will use purposive sampling method because it's most suitable for our study because the study population include only physicians who work in King Salman Armed Forces Hospital (KSAFH) in Tabuk. The sample size was calculated based on previous similar study conducted in Saudi Arabia, which showed the prevalence of headache among participants as 88.3% (Alzahrani et al., 2017). So sample size was calculated by using this equation; $n= z^2pq/ m^2$

Where:

z = z value (1.96 for 95% confidence level)

p = assumed proportion = 88%

q = 1-p (complementary) = 12%

m = margin of error = 0.05

So the sample size will be $(1.96)^2 *0.88*0.12/(0.05)^2$ equal 163 Physicians who fulfill the inclusion criteria.

**Inclusion and Exclusion Criteria**

The participants should be physicians work in King Salman Armed Forces Hospital (KSAFH) in Tabukduring study period and willing to participate in this study, while exclusion criteria include, non-physician healthcare providers, physicians work in other hospitals in Tabuk or physicians work in King Salman Armed Forces Hospital (KSAFH) in Tabuk but not willing to participate in the study.

**Data management and analysis**

After reviewing and coding the collected data, data was analyzed using Statistical Package for Social Sciences (SPSS 24), where both descriptive statistics such as frequency and percentage was used for qualitative variables, mean and SD for quantitative variables while advanced analysis such as Chi-square was used to compare between dependents and independents variables.

**Ethical consideration**

This study was approved from the research and ethical committee at King Salman Armed Forces Hospital (KSAFH)) and all ethical issues should be considered during the process of this study and all participants should fill the informed consent before participating and they should be informed about the objectives of this study and their rights to withdraw from study when needed and they should be informed about the confidentiality and privacy issues.

## 3. RESULTS

Majority of participants were within the age of 25 to 39 and 40 to 59 years old, (61%) and (35%) respectively, male represents 68% while female represents 32%, most of them were married (66%), have income level more than 15000 SRs (94%), Only 4% of participants from Emergency, 39% from OPD and 56% from wards, most of participants were specialized either in Surgery (15%), Medicine (23%), Pediatric (12%) or Obs (8%), while 43% of participants from other specialties. About 29% never do any type of physical activity, 31% do it for one hour per week, 28% do it for 1 - 3 hours per week, while only 12% do it for more than 3 hours per week. About35% was smokers (table 1).

**Table 1** Demographic Characteristics (n =163)

| Variable | Sub Variable | Fr. | % |
|---|---|---|---|
| Age Group | 18-24 | 3 | 1.8 |
| | 25-39 | 99 | 60.7 |
| | 40-59 | 57 | 35.0 |
| | 60+ | 4 | 2.5 |
| Gender | Male | 110 | 67.5 |
| | Female | 53 | 32.5 |
| Marital status | Single | 54 | 33.1 |
| | married | 107 | 65.6 |

| | | | |
|---|---|---|---|
| | divorced\widow | 2 | 1.2 |
| Income | <15,000 SR | 10 | 6.1 |
| | >15,000 SR | 153 | 93.9 |
| Department | Emergency | 7 | 4.3 |
| | OPD | 64 | 39.3 |
| | Wards | 92 | 56.4 |
| Specialty | Surgery | 24 | 14.7 |
| | Medicine | 37 | 22.7 |
| | Pediatrics | 19 | 11.7 |
| | Obs. | 13 | 8.0 |
| | Other | 70 | 42.9 |
| Physical activities | never | 48 | 29.4 |
| | 1 | 50 | 30.7 |
| | 1-3 | 45 | 27.6 |
| | +3 | 20 | 12.3 |
| Smoking | Yes | 57 | 35.0 |
| | No | 106 | 65.0 |

About 86% of participants had a headache in the last three months, 38% of them had headache in weekly basis (figure 1), 49% of these headaches begin gradually and at the night, in 36% of participants headaches usually last with medication in minutes and last with medication in hours in 45% of participants, while the headaches usually last without medication in minutes among 12% and in hors among 60%. The intensity of the headache either mild (46%) or moderate (53%). As shown in figure 2, headaches are bilateral (53%) or one-sided (47%), it also pulsating / throbbing (39%) or dull / pressing (61%) (Table 2). Half of participants (50%) mentioned that daily activities are impaired but not inhibited due to headache, 75% mentioned that headache worsened by physical activities (figure 3). Participants also mentioned that headaches are sensitive to light (49%) and sensitive to noise (60%). About (49%) had family history of headache (table 3).

About 47% of participants' quality of life were never affected by headache, 36% affected rarely, 15% affected some times and only 2% affected very often. As mentioned in table 4, the average score equal 20, by using 5-point Likert-scale (6 = never; 8 = rarely, 10 = sometimes, 11 = very often; 13 = always). The currently recommended scoring of the HIT-6 was derived to approximate the total score obtained from the larger battery of items, using results from item response theory, scores ≤ 49 represent little or no impact, scores between 50 and 55 represent some impact, scores between 56 and 59 represent substantial impact, and scores ≥ 60 indicate severe impact. As mentioned in table 5, 6 and 7, there was no statistical association between occurrence of headache, working department and speciality, P Value > 0.05, while there was statistical association between occurrence of headache and gender, P value < 0.05

**Table 2** Shows history of headache, how often, Intensity and type

| Variable | Sub Variable | Fr. | % |
|---|---|---|---|
| Did you have a headache in the last three months? | Yes | 140 | 85.9 |
| | No | 23 | 14.1 |
| On average, how often do you have headaches? | Daily | 1 | .6 |
| | Weekly | 62 | 38.0 |
| | Monthly | 100 | 61.3 |
| Are headaches increasing in frequency? | Yes | 29 | 17.8 |
| | No | 134 | 82.2 |
| Headaches typically begin | Gradually | 79 | 48.5 |
| | Suddenly | 12 | 7.4 |
| | Varies | 72 | 44.2 |
| Headaches usually begin in the …. | Morning | 45 | 27.6 |
| | Evening | 30 | 18.4 |
| | Night | 88 | 54.0 |

| | | | |
|---|---|---|---|
| Headaches usually last (with medication) | Minutes | 59 | 36.2 |
| | Hours | 74 | 45.4 |
| | Day | 13 | 8.0 |
| | No Medication Use | 17 | 10.4 |
| Headaches usually last (without medication) | Minutes | 19 | 11.7 |
| | Hours | 97 | 59.5 |
| | Day | 47 | 28.8 |
| Intensity of the headache | Mild | 75 | 46.0 |
| | Moderate | 87 | 53.4 |
| | Sever | 1 | .6 |
| Headaches type | Bilateral | 87 | 53.4 |
| | One-sided | 76 | 46.6 |
| Headaches are | Pulsating \ throbbing | 64 | 39.3 |
| | Dull \ pressing | 99 | 60.8 |

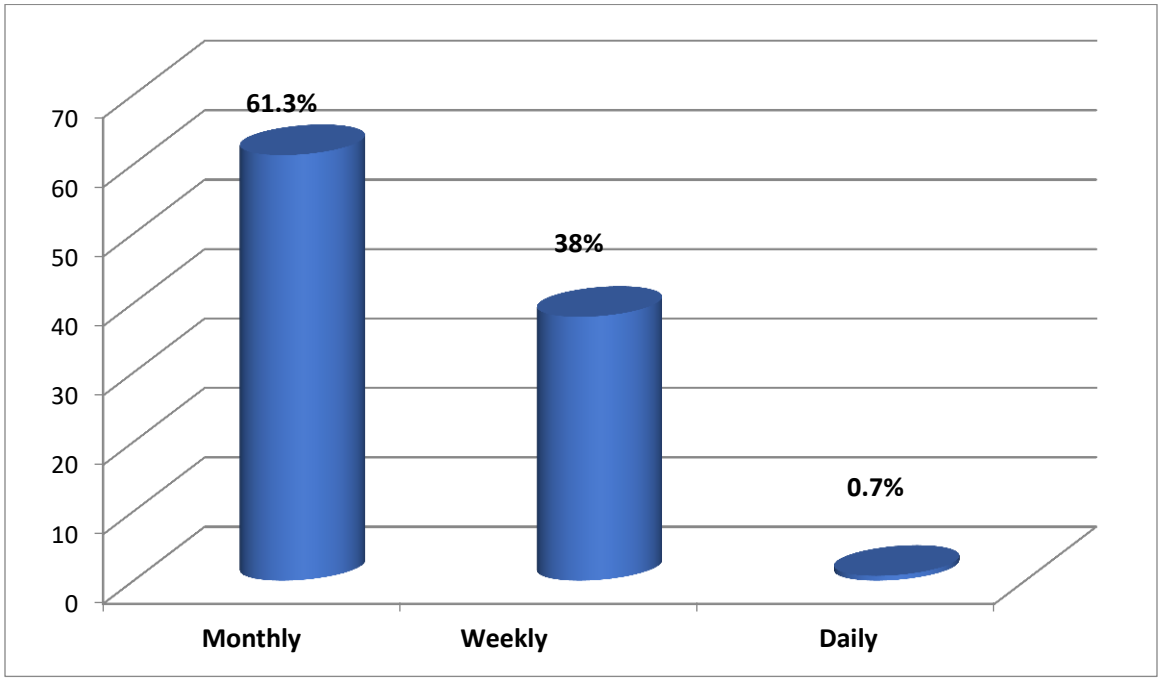


**Figure 1** on average, how often respondent phsicians have headaches

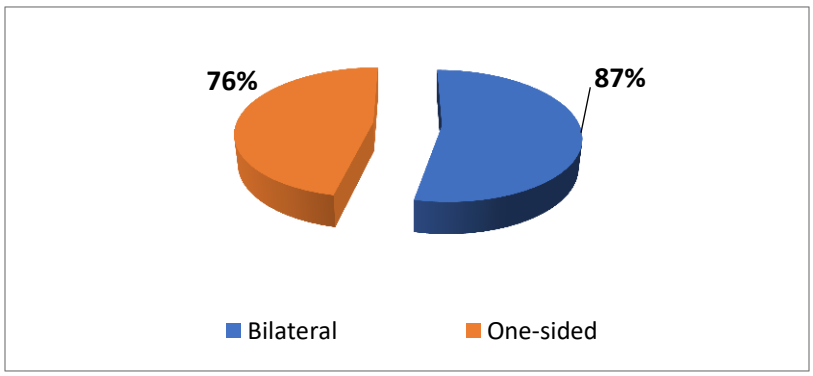


**Figure 2** Headaches type in the studied phsicians, KSAFH, Tabuk, KSA

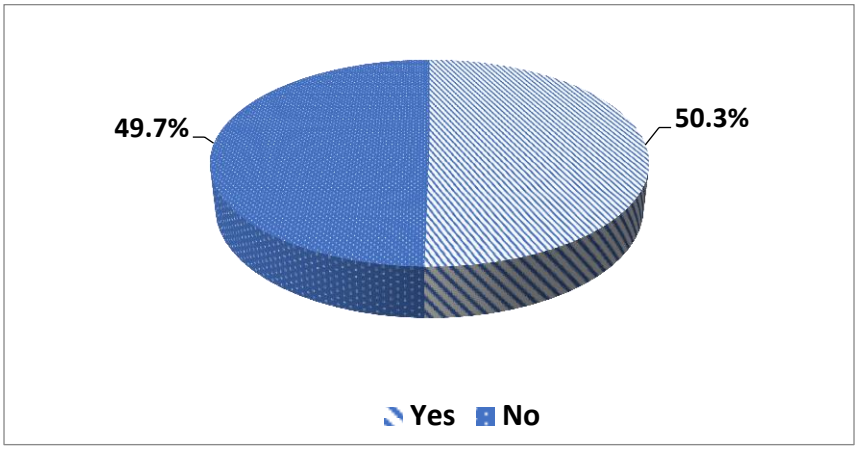


**Figure 3** Daily activities are impaired but not inhibited due to headach, in the studied physicians, Tabuk, KSA

**Table 3** Shows how to deal with headache and its health impacts

| Variable | Sub Variable | Fr. | % |
|---|---|---|---|
| Consultation of headache specialists | General practitioner | 2 | 1.2 |
| | Family Physician | 7 | 4.3 |
| | Neurologist | 3 | 1.8 |
| | None | 151 | 92.6 |
| Daily activities are impaired (can still be performed) but not inhibited (cannot be performed anymore) | Yes | 82 | 50.3 |
| | No | 81 | 49.7 |
| Headache worsened by physical activities | Yes | 123 | 75.5 |
| | No | 40 | 24.5 |
| Headaches are associated with Nausea | Yes | 26 | 16.0 |
| | No | 137 | 84.0 |
| Headaches are associated with Vomiting | Yes | 0 | 0 |
| | No | 163 | 100.0 |
| Sensitivity to light | Yes | 79 | 48.5 |
| | No | 84 | 51.5 |
| Sensitivity to noise | Yes | 98 | 60.1 |
| | No | 65 | 39.9 |
| One or more completely reversible neurological deficiencies (e.g., impaired vision or speech disorder) | Yes | 0 | 0 |
| | No | 163 | 100.0 |
| Medication use | No medication | 102 | 62.6 |
| | Prescription | 51 | 31.3 |
| | Over the counter | 10 | 6.1 |
| Family history of headache | Yes | 73 | 44.8 |
| | No | 90 | 55.2 |
| Headache duration (in years) | 1-3 Years | 78 | 47.9 |
| | 3-5 Years | 48 | 29.4 |
| | > 5 years | 37 | 22.7 |
| In the last year, how often have you absent from your work because of your headaches? | 1-5 days | 13 | 8.0 |
| | None | 150 | 92.0 |

**Table 4** Shows Headache and its impacts on quality of life

| | Never | | Rarely | | Sometimes | | Very often | | Always | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Fr. | % | Fr. | % | Fr. | % | Fr. | % | Fr. | % |
| How often have headaches interfered with how well you dealt with family, friends and others who are close to you? | 63 | 38.7 | 62 | 38.0 | 36 | 22.1 | 2 | 1.2 | 0 | 0 |
| How often have headaches interfered with your leisure time activities, such as reading or exercising? | 56 | 34.4 | 68 | 41.7 | 36 | 22.1 | 2 | 1.2 | 1 | .6 |
| How often have you had difficulty performing work or daily activities because of headache symptoms? | 55 | 33.7 | 69 | 42.3 | 35 | 21.5 | 4 | 2.5 | 0 | 0 |
| How often did headaches keep you from getting as much done at work or at home as you would like? | 94 | 57.7 | 52 | 31.9 | 17 | 10.4 | 0 | 0 | 0 | 0 |
| How often did headaches limit your ability to concentrate on work or daily activities? | 38 | 23.3 | 60 | 36.8 | 53 | 32.5 | 10 | 6.1 | 2 | 1.2 |
| How often have headaches left you too tired to do work or daily activities | 58 | 35.6 | 71 | 43.6 | 29 | 17.8 | 5 | 3.1 | 0 | 0 |
| How often have headaches limited the number of days you have felt energetic? | 67 | 41.1 | 71 | 43.6 | 22 | 13.5 | 2 | 1.2 | 1 | .6 |
| How often have you had to cancel work or daily activities because you had a headache? | 74 | 45.4 | 71 | 43.6 | 17 | 10.4 | 1 | .6 | 0 | 0 |
| 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 headache? | 94 | 57.7 | 35.6 | 35.6 | 6.1 | 6.1 | 1 | .6 | 0 | 0 |
| How often did you have to stop work or daily activities to deal with headache symptoms? | 65 | 39.9 | 57 | 35.0 | 34 | 20.9 | 5 | 3.1 | 2 | 1.2 |
| How often were you not able to go to social activities such as parties or dinner with friends because you had a headache? | 91 | 55.8 | 58 | 35.6 | 14 | 8.6 | 0 | 0 | 0 | 0 |
| How often have you felt fed-up or frustrated because of you headaches? | 94 | 57.7 | 41 | 25.2 | 19 | 11.7 | 7 | 4.3 | 2 | 1.2 |
| How often have you felt like you were a burden on others because of your headaches? | 113 | 69.3 | 44 | 27.0 | 6 | 3.7 | 0 | 0 | 0 | 0 |
| How often have you been afraid of letting others down because of your headaches? | 112 | 68.7 | 42 | 25.8 | 8 | 4.9 | 0 | 0 | 0 | 0 |
| The overall effect of headache on quality of life | 77 | 47 | 58 | 36 | 24 | 15 | 3 | 2 | 1 | 1 |
| Mean | 20.8 | | | | | | | | | |
| Std. Deviation | 3.1 | | | | | | | | | |
| Minimum | 15.6 | | | | | | | | | |
| Maximum | 30.0 | | | | | | | | | |

**Table 5** Chi square test to compare between headache and working department

| | | | Department | | | Total | P Value |
|---|---|---|---|---|---|---|---|
| | | | Emergency | OPD | Wards | | |
| 1. Did you have a headache in the last three months? | Yes | Count | 6 | 57 | 77 | 140 | 0.63 |
| | | % within 1. Did you have a headache in the last three months? | 4.3% | 40.7% | 55.0% | 100.0% | |
| | | % of Total | 3.7% | 35.0% | 47.2% | 85.9% | |
| | No | Count | 1 | 7 | 15 | 23 | |
| | | % within 1. Did you have a headache in the last three months? | 4.3% | 30.4% | 65.2% | 100.0% | |
| | | % of Total | .6% | 4.3% | 9.2% | 14.1% | |
| Total | | Count | 7 | 64 | 92 | 163 | |
| | | % within 1. Did you have a headache in the last three months? | 4.3% | 39.3% | 56.4% | 100.0% | |
| | | % of Total | 4.3% | 39.3% | 56.4% | 100.0% | |

**Table 6** Chi square test to compare between headache and specialty

| | | | specialty | | | | | | P Value |
|---|---|---|---|---|---|---|---|---|---|
| | | | Surgery | Medicine | Paediatric | Obs. | Other | Total | |
| 1. Did you have a headache in the last three months? | Yes | Count | 21 | 29 | 15 | 12 | 63 | 140 | 0.4 |
| | | % within 1. Did you have a headache in the last three months? | 15.0% | 20.7% | 10.7% | 8.6% | 45.0% | 100.0% | |
| | | % of Total | 12.9% | 17.8% | 9.2% | 7.4% | 38.7% | 85.9% | |
| | No | Count | 3 | 8 | 4 | 1 | 7 | 23 | |
| | | % within 1. Did you have a headache in the last three months? | 13.0% | 34.8% | 17.4% | 4.3% | 30.4% | 100.0% | |
| | | % of Total | 1.8% | 4.9% | 2.5% | .6% | 4.3% | .0% | |
| Total | | Count | 24 | 37 | 19 | 13 | 70 | 163 | |
| | | % within 1. Did you have a headache in the last three months? | 14.7% | 22.7% | 11.7% | 8.0% | 42.9% | 100.0% | |
| | | % of Total | 14.7% | 22.7% | 11.7% | 8.0% | 42.9% | 100.0% | |

**Table 7** Chi square test to compare between headache and Gender:

| | | | Gender | | Total | P Value |
|---|---|---|---|---|---|---|
| | | | Male | Female | | |
| 1. Did you have a headache in the last three months? | Yes | Count | 90 | 50 | 140 | 0.02 |
| | | % within 1. Did you have a headache in the last three months? | 64.3% | 35.7% | 100.0% | |
| | | % of Total | 55.2% | 30.7% | 85.9% | |
| | No | Count | 20 | 3 | 23 | |
| | | % within 1. Did you have a headache in the last three | 87.0% | 13.0% | 100.0% | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | months? | | | | |
| | | % of Total | 12.3% | 1.8% | 14.1% | |
| Total | | Count | 110 | 53 | 163 | |
| | | % within 1. Did you have a headache in the last three months? | 67.5% | 32.5% | 100.0% | |
| | | % of Total | 67.5% | 32.5% | 100.0% | |

## 4. DISCUSSION

This current study was conducted to determine the prevalence and impact of primary headache on job performance and quality of life among physicians at King Salman Armed Forces Hospital (KSAFH) in Tabuk. For the purpose of this study about 163 physicians from different departments were selected, of whom 68% were males, while 32% were females, only 4% of participants from Emergency, 39% from OPD and 56% from wards, most of participants were specialized either in Surgery (15%), Medicine (23%), Pediatric (12%) or Obs. (8%), while 43% of participants from other specialties. Headache, or migraine, is an episodic disorder with chronic nature than can lasts for years and exacerbates with time and it is a main cause of work and daily life disability as reported by The World Health Report, headache is associated with significant impairment in physical, emotional and social life of the sufferer (Haut et al., 2006). This study indicated that the prevalence of primary headache was 86% in the last three months. This prevalence is much higher than the mean of global headache prevalence 46% as well as the general population prevalence in Saudi Arabia 63% (Al Jumah et al., 2020 & Stovner et al., 2007). And the other studies among varies Health Care Workers (HCWs) that conducted in Switzerland, Nigeria, Taiwan and North China offer 61%, 39.3%, 49.6% and 45.3%, respectively (Sokolovic et al., 2013; Wang et al., 2015). These stringent results refer to the burden of stress that affecting health care professionals (Koinis et al., 2015).

The current study found that 38% of participants had headache in weekly basis, 49% of these headaches begin gradually and at the night. Recent study conducted in January 2020 found 75% prevalence of headache in the last 3 months among family medicine residents in Jeddah, Taif, and Makkah, it also found an average of 44% of family medicine residents had experienced a headache in a weekly basis and only 48.6% of the resident said they seek medical consultation. Another study conducted in 2018 among general population in Taif city indicated prevalence rate of 78.5% of the respondents suffered of headache in the last 3 months (Almalki et al., 2018). Similar study conducted in 2017 found the last three months prevalence of headache among medical and paramedical emergency department staff was 88.3% (Alzahrani et al., 2017). Different prevalence rates of headache were reported from different countries due to population characteristics and different definitions of headache prevalence in Kuwait (Al-Hashel et al., 2014), The United States (Johnson et al., 2014) and India (Shahrakai et al., 2011).

In this study, the intensity of the headache either mild (46%) or moderate (53%), this finding was consistent to similar study conducted in 2020 in Saudi Arabia which showed that the intensity of headache was mild, moderate and severe in 38.5%, 47.7% and 13.8%. Differently, in a study among Saudi medical students and interns, the intensity of pain was severe in 41.6%, while it was moderate and mild in 43.6% and 14.8% of the respondents (Ibrahim et al., 2017). In this present study, 36% of participants' headaches usually last with medication in minutes and last with medication in hours in 45% of participants, while the headaches usually last without medication in minutes among 12% and in hours among 60%, these findings is differ than previous study conducted by Ibrahim et al., (2017), which showed that the majority of the residents (60%) used over-the-counter medications to treat their headache. A higher percentage is (72.5%). The present study also found that the headache either pulsating \ throbbing (39%) or dull \ pressing (61%), in previous study pulsating nature of the headache was more common among the family medicine residents, than pressing or dull pain which accounted for 30.5% and 27%, respectively.

Finally, this study revealed that there was no statistical association between occurrence of headache, working department and specialty, while there was statistical association between occurrence of headache and gender, prevalence of headache among males was more than females (64% and 36% respectively, previous study conducted by Ibrahim et al., (2017) found no significant difference in the prevalence of headache between males and females. However, the findings from study included Saudi medical students and interns found a higher prevalence of headache in females than that in males (33.2% versus 15.5%). Almalki et al., (2018) found a significant gender difference in headache prevalence which was 86.9% in females in comparison to 71.6% in males.

## 5. CONCLUSIONS

The headache is one of the most common neurological disorders. It is in the form of pain and disability that occur in primary headache disorders called cluster, migraine, tension-type headache. The primary headache prevalence is very high among

physicians at King Salman Armed Forces Hospital (KSAFH) in Tabuk. The impact of headache on job performance is little in most of the staff, but there is significant percent of those with severe impact.

**Conflict of interests**

The authors declared no conflict of interests

**Authors' contributions**

Dr. Saeed Moshref Alshehri shared in setting the study design, research objectives, preparing study instrument, pilot administration, data collection, and reviewing the results. Dr. Abdulrahman Eid Albalawi, shared in preparing study proposal, logistics plan, data collection plan, supervised data entry and conducted the statistical analysis, data display, discussion guidelines, and final write up. Manea Nasser AL-Hablany, held study approvals and supervised study phases. All authors read and approved the final manuscript.

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**Informed consent**

Written and oral informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this manuscript.

**Ethical approval**

The study was approved by the Research Ethics Committee of the King Salman Armed Forces Hospital (KSAFH) in Northwestern region, Tabuk, Kingdom of Saudi Arabia. Ethical approval number KSAFH-REC-2020-379.

**Data and materials availability**

All data associated with this study are present in the paper.

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