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Assessment of Self-Medication and Disease Awareness about Migraine in Local Community of Multan, Pakistan

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Abstract

Background: Self-Medication and Poor disease awareness of Migraine is the furthermost public well-being concern in many countries, as well as in Pakistan. Thus considering the current epidemiological evidence about that issue, this study aimed to determine the systematic analysis of Self-medication and disease awareness about Migraine in Multan's Community.

Methods: A cross-sectional study was conducted in Multan's Community of about 306 participants. Among them 130 were males and 176 were Females. Statistical analysis was done by using IBM SPSS statistics version 23. And different tests (Pearson's Chi-Square test, Independent sample t-test as well as Mann-Whitney U test) are being applied.

Results: The whole target (n=306) participated in our study. Out of 306 participants, females had the greatest practice of Self-medication (54.90%) than males (42.15%). Also, females have a greater ratio (28.43%) than males (19.93%) for seeking not any help from doctors for migraine's problems. The Paracetamol drug was being the most self-medicated drug for females (13.07%) than males (12.74%).

Conclusion: The results showed a higher prevalence of Self-medication in the Multan community. Findings suggest that there should be educational seminars and efficient Migraine care management plans should be planned for doctors for proper disease awareness and to reduce to self-medication burden for patients.

Keywords: Migraine; Self-Medication; Global Burden; Vomiting; Prevalence

Introduction

According to the current Global Burden of disease survey conducted in 2016, Neurological complaints are considered the second most prominent sources that resulted in years wasted with debility [1]. Among such neurological disorders (primary and secondary types), the rank of Migraine is 3rd in such disorders (a major type of primary headache disorders) [2].

The continuous severe attacks of headache occur on half side of the head that is most difficult to bear for any person with associated indications that may continue up to 3 days is known as Migraine [3,4]. The most prominent indications with migraine attacks are Sickness, Vomiting, and having feelings of sensitivity to bright light, strong smells, and knocking sounds [3]. In this modern Medical Era, Doctors are not still able to understand its exact Mechanism behind that [3]. The most commonly accepted theory behind that is

the Cortical Spreading Depression Theory. In that, complex electrical impulses are produced in the brain stem that resulted in three major problems e.g sensory, visual, and motor nerves related problems [5]. It mostly consists of 4 major phases (Prodrome phase, Aura phase, Pain phase, and Postdrome phase). It has 2 types, one is Migraine with Aura, and the other is Migraine without Aura. It has strong hereditary relationships with Parents as shown in a similar study in Jalandhar (India) [6].

It has the highest global prevalence ratio than any other acute and chronic diseases in developed and underdeveloped countries. Its High prevalence is estimated from the fact that around about 1 in every 7 people in the whole world is affected by that horrible disease and it has the highest prevalence ratio in women than men [7].

Despite its high prevalence and high disability effects in Pakistan and even in Developed countries, this disease is still managed in a poor healthy manner, and the affected people in that disease mostly find its treatment in Self-Medication practice due to its very low poor awareness and also its Self-Medication practice is very highest. A practice of being using Medicines without a doctor's prescription to treat disease Indications is known as Self-Medication [8]. Various studies have been conducted regarding the assessment of Self-medication and disease awareness about Migraine in Pakistan.

In a same recent study conducted in Rawalpindi among Medical students in 2016 about (95.3%) participants have done the practice of Self-Medication and the major disease's indications behind that were Headache Disorders (69.5%). Also in that study Analgesics were the most Self-medicated medicines (74.5%) as shown in our research study [9]. A survey conducted in Jalandhar (India) in 2017 showed that overall awareness of migraine among people was about (85%) but there were not well aware of its proper treatment (23%) [6]. There is also an increasing trend of Self-medication practice among people of Multan's city for various health disorders as shown in a study conducted among students of Bahauddin Zakariya University, such practice was found to be 75% [8].

Multan is the Central Hub of Punjab province and is known as the big city of Punjab province after Lahore. It is famous for its longest hot climate season. We already know that hot Climate season act as a very good environmental trigger for the generation of Migraine's related symptoms. Thus keeping in view the hot climate season of Multan, the high prevalence of Migraine globally, and as well as its Low Awareness in Pakistan, we conducted a Cross-Sectional survey study about the assessment of Self-Medication practice and disease awareness of Migraine in Multan's Community. In our Questionnaire, Migraine was assessed by the ID-migraine Screening test and Migraine Disability Assessment score.

Materials and Methods

Study design and Sample Size Calculation

A cross-sectional study was conducted in a sample of (n=306) participants among Multan's Community regarding the assessment of self-medication and disease awareness about migraine. For sample size, we use the Raosoft® online sample size calculator. Required sample size (n=278) is increased up to (n=306) for strong evident data.

Inclusion and Exclusion Criteria and Data Collection Criteria

Only those participants having only neurologic disorders (mostly migraine) and are only the permanent residents of Multan city are included whereas participants having diseases other than neurological disorders are excluded from our study. We collected our data from patients and students from different colleges and Universities in Multan city.

Data Collection Tool: the Questionnaire

A questionnaire was being produced from reviewing previous related journals. First, the questionnaire was pretested on 12 participants through a content validation index. The value of Crohnbach's alfa was calculated as 0.662 showing good internal consistency. We use simple English language for our questionnaire. The questionnaire is made consists of demographic statistics including gender, age, qualification as well as socio-economic status. After that questions about the assessment of migraine by ID-MS* test and MIDAS* and also, in the end, included questions regarding duration of taking medicines, pain alleviation, medicines being taken, seeking help, and regarding migraine as an illness. However, some of the questions were manually asked from patients regarding beliefs and causes behind self-medication.

Ethical approval

The ethical committee of the Department of Pharmacy Practice BZU Multan approved this research. It was also under the supervision of Chairman Department of Pharmacy Practice BZU Multan.

Statistical analysis

The required data results were collected and were entered on IBM Statistical software for Windows (version 23.0

SPSS Inc. Chicago, IL, USA). Different tests like independent sample t-test, Chi-square test, Mann Whitney U-test were used for analysis. The value of P<0.05 was considered to be statistically significant.

Results

The whole target (n=306) took part in our study.Out of 306 participants, (n=130, 42.4%) were Males and (n=176, 57.5%) were Females.Our overall mean age was 23 years with Standard Deviation 6.88. We distributed the Demographic data of participants by Gender to get more differences and probabilities. The distribution of Demographic data according to Gender with P values having target n=306 is shown in Table 1.

Variables	Males n(%)	Females n(%)	P value
Gender	130 (42.48%)	176 (57.51%)	
Age status			0.00
Teenagers	14 (4.57%)	47 (15.35%)	
Young adults/Youngsters	96 (31.37%)	123 (40.19%)	
Mature adults	9 (2.94%)	5 (1.63%)	
Middle age adults	11 (3.59%)	1 (0.32%)	
Old age/Elders	0 (0)	0 (0)	
Qualification			0.20
Illiterate	3 (0.98%)	1 (0.32%)	
Primary/Secondary	16 (5.22%)	5 (1.63%)	
Undergraduate	84 (27.45%)	138 (45.09%)	
Postgraduate	27 (8.82%)	22 (7.18%)	
Social status			0.97
Lower class	2 (0.65%)	5 (1.63%)	
Lower middle class	32 (10.45%)	38 (12.41%)	
Upper middle class	89 (29.08%)	127 (41.50%)	
Upper class	7 (2.28%)	6 (1.96%)	

Table 1: Demographic distribution of data According to Gender with P values having the target of n=306.

As mentioned in above Table 1, the P value for Age's status is very lower than 0.0 so its result is significant (but p values for Qualification and Social status are greater than standard p values e.g 0.20 and 0.97 so the results of both variables are Non-significant. In Age's status Males were lesser (n=96, 31.37%) than Females (n=123, 40.19%). Also in Qualification females were a higher number in number (n=138) than males (n=84) in the undergraduate variable. In Social status, females were also greater in number (n=127) than males (n=89) in the upper Middle class.

For assessment of major signs and symptoms of migraine patients e.g Nausea, Light Bothering and Limited ability to do work, we used ID-Migraine Screening Test (questionnaire) whose results are shown concerning Gender with n=306 in Table 2.

Variables	Males n(%)		Females n(%)		P values
ID-Migraine Screening Test	Yes	No	Yes	No	
• You feel nauseated or sick to your stomach.	51(16.66%)	79(25.81%)	88(28.75%)	88(28.75%)	0.061
• Light bothered you (a lot more than when you do not have Headaches)?	81(26.47%)	49(16.01%)	115(37.58)	61(19.93%)	0.585
• Your headaches limited your ability to do work, study, or do what you needed to do.?	99(32.35%)	31(10.31%)	142(46.40%)	34(11.11%)	0.338

Table 2: Results of ID-Migraine Screening Test concerning Gender with n=306.

As in Table 2, the three p values are obtained as they are two different variables **(Yes and No)** for each Question (0.061, 0.585, and 0.338), also note that the females' ratio was greater in every three questions.

Then we determined the disability of Migraine's Symptoms (low disability to highest disability) by the Help of Migraine Disability Assessment Score with Grades whose results concerning Males are shown in Table 3.

	Migraine Disability Assessment Score				
Variables	Grade I (0-5)	Grade II (6-10)	Grade III (11-20)	Grade IV (21+)	P value
Males	34 (11.11%)	20 (6.53%)	28 (9.15%)	48 (15.68%)	0.901

Table 3: Results of Migraine Disability Assessment Score concerning Males having n=130.

Please note that in Table 3, the p-value is greater than 0.05 so the results of the Migraine Disability Assessment Score are non-significant for Males. Also mostly males (n=48, 15.68%) were in Grade IV (severe disability) that showed migraine is more common in Multan's Community also in Males.

	Migraine Disability Assessment Score				
Variables	Grade I (0-5)	Grade II (6-10)	Grade III (11-20)	Grade IV (21+)	P value
Females	51 (16.67%)	24 (7.84%)	34 (11.11%)	67 (21.89%)	0.901

Table 4: Results of Migraine Disability Assessment Score concerning Females having n=176.

Note that in above Table 4, the resulted p value is greater than 0.05, so the results of the Migraine Disability Assessment Score for females (n=176) are non-Significant. Also note that most of the Females (n=67, 21.89%) were also in Grade IV (severe disability) that showed migraine is more common in Multan's Community also in Females.

We also apply the Mann-Whitney U test On Migraine Disability Assessment Score to check whether there is a significant relationship between Gender and That Questionnaire. Please note that the Gender case for that test is kept as Independent Variable. The results of the Mann-Whitney U test on our Questionnaire are shown in Table 5.

	Migraine Disability Assessment Score
Mann-Whitney U	11337.000
Wilcoxon-W	26913.000
Z	-1.41
Asymptomatic Significance (2-tailored)	.888

Table 5: Test Statistics for Mann-Whitney U test of Migraine Disability Assessment Score.

Variables	Males n(%)	Females n(%)	P values
How many days in each month do you take pain medications for the headache?			0.105
Upto 3 days	41 (13.39 %)	52 (16.99%)	
4 to 10 days	16 (5.22%)	38 (12.41%)	
Not remember	73 (23.85%)	86 (28.10%)	
Does the Pain get alleviated by taking the medicines?			0.098
Yes	26 (8.49%)	49 (16.01%)	
Often	54 (17.64%)	56 (18.30%)	
Rarely	21 (6.86%)	40 (13.07%)	
No	29 (9.47%)	31 (10.13%)	
Do you seek help from medical professionals?			0.586

Family doctor	61 (19.93%)	87 (28.43%)	
Migraine centre	59 (19.28%)	71 (23.20%)	
Nobody	10 (3.26%)	18 (5.88%)	
Do you regard your Migraine as an illness?			0.035
Yes	58 (18.95%)	100 (32.67%)	
No	72 (23.52%)	76 (24.83%)	

Table 6: Results about the Duration of Taking Pain Medicines, Alleviation of pain by taking the Medicines, Seeking help from Medical Professionals and in the end Regarding Disease illness with Chi-square test concerning Gender having n=306.

To evaluate the difference between Male and Female gender for Migraine Disability Assessment Score we used the Mann-Whitney U test. The test revealed a non-significant difference for the Migraine Disability Assessment Score for Males (Median=3, n=130) and Females (Median=3, n=176), U=1137.00, z=-1.41, p=0.888, r=0.08 so the hypothesis for a significant relationship is not so supported.

Note that in Table 6, the p values for Duration of taking pain medicines, Pain Alleviation by taking medicines, Seeking help from medical doctors for treatment of Migraine are greater than standard p values (0.105, 0.098, 0.586) than standard p value 0.05, so these results are not significant. But in the case of regarding migraine as an illness, the p value is less than the standard p value e.g 0.03 so its result is significant.

Variables	Males n(%)	Females n(%)
Self- Medicated Medicines being used	129 (42.156%)	168 (54.901%)
Patients not using any medicines for their Disease's status	1 (0.326 %)	8 (2.614%)
Panadol +Panadol extra (Tablets)	35 (11.437%)	19 (6.209 %)
Panadol (Tablets)	39 (12.745%)	40 (13.07%)
Inderal +Flagyl (Tablets)	1 (0.326 %)	2 (0.653%)
Arinac+ Arinac forte (Tablets)	1 (0.326%)	0 (0 %)
Panadol +Disprin (Tablets)	3 (0.980%)	4 (1.307%)
Hitop (Tablets)+Neurobion (Injection)+Movax (Tablets)	0 (0%)	3 (0.980%)
Disprin (Tablets)	3 (0.980%)	4 (1.307)
ALP (Tablets)	0 (0%)	1(0.326)
Valium +Synflex (Tablets)	2 (0.653%)	6 (1.960%)
Sibelium+Inderal+Flexin (Tablets)	0 (0%)	3 (0.980%)
Reflexotherapy +Homeopathy+Head massage+ Cold shower	2 (0.653)	17 (5.555%)
Fluwitt+Zomig+Voren (Tablets)	9 (2.941%)	23 (7.516%)
Tramal (Tablets)	3 (0.980%)	0 (0%)
Omega (capsules)+Panadol (Tablets)	1(0.326%)	0 (0%)
Axert+ Amerge (Tablets)	3 (0.980%)	1 (0.326%)
Vitamins+Gravinate(syrup)	5(1.633%)	20 (6.535%)
Nuberol+Nuberol forte+Ceflam+Millisprol (Tablets))	9 (2.94%)	9 (2.94%)
Ponstan+ Ponstan forte (Tablets)+Rest+ Caffeine	13 (4.248%)	16 (5.228%)

Table 7: Various Self-medicated Medicines being used for Self – Medication Practice for Migraine as well as various disorders concerning Gender n=306.

In above Table # 7, the Chi-Square test is not so applicable. Also note that Panadol is the most self-medicated drug (n=40, 13.071%) being used by females than Males (n=39, 12.745%). The Ratio of Self-Medication Practice for Migraine

was highest for Females (54.90%) than males (42.15%).

With the help of the Independent Sample t-test, we calculated the results regarding illness (independent variable) with Gender (dependent variable). We conclude that those who said Yes (M=0.51, SD=0.502) had significantly lower Gender score than those who said No (M=0.63, SD=0.48), t (304) =2.12, p<0.05, d=0.21 (by the help of t-test for equality of means) as shown in Table 8.

		Levene's test for equality of means	
		Factor (F)	Significance
Gender	Equal variance assumed	10.837	0.001
	Equal variances not assumed		

Table 8: Results of Independent Sample t-test concerning regarding Migraine as an illness (Levene's Test for Equality of Means).

In Table 8, the level of significance for Levene's test for equality of Means is less than 0.05.

t-test for Equality of Means						
					95% Confidence Interval of the Difference	
t	Degree of freedom	Significance (2- tailed)	Mean Difference	Standard Error Difference	Lower	Upper
2.12	304	0.305	0.119	0.056	0.009	0.23
2.118	300.868	0.305	0.119	0.056	0.008	0.23

Table 9: Results of Independent Sample t-test regarding Migraine as an illness (t-test for Equality of Means).

In above table 9, the degree of freedom is about 304, and the level of significance is 0.305

Confounding Questions

From the participants, we also asked some extra questions called Confounding questions other than our required questionnaire. These are those questions that affect the positive and negative outcomes of a Study. These questions were about Reasons behind Self-Medication Practice, Symptoms leading to Self-Medication Practice, Sources behind Self-Medication Practice, and others. Not any test is applied to them. The various reasons behind Self-medication practice by gender n=306 are shown in Table 10.

As shown in Table 10, Females pointed out the most reason for the High Doctor's fee (n=32) than Males (n=29). Similarly prescribing of high potent drugs by the doctors to their Patients showed a big reason for Self-Medication practice in males (8.82%) than females (7.51%) after High Doctor's Fee.

Reasons behind Self-Medication	Males n (%)	Females n (%)
High Doctor's Fee	29 (9.47%)	32 (10.45%)
Problem too trivial to discuss	5 (1.63%)	6 (1.96%)
Poor Attention by the Doctors	2 (0.65%)	16 5.22(%)
Good Experience by Self –Medication practice	8 (2.61%)	10 (3.26(%)
Not trust on Doctors to detect illness	7 (2.28%)	12 (3.92%)
Prescription of same medicines by the doctors	5 (1.63%)	12 (3.92(%)
Self-confident to treat illness	7 (2.28%)	8 (2.61(%)
Waiting in lines or outside Doctor's Offices for Checkup	4 (1.30%)	5 (1.63(%)
Advice By the Elders for treating illness	17 (5.55%)	3 (0.98(%)

Feeling shy to tell the symptoms of a disease to Doctors	1 (0.32%)	3 (0.98%)
Busy Life schedule	2 (0.65%)	6 (1.96%)
To get Quick relief from the diseases	5 (1.63%)	11 (3.59%)
Previous disease symptoms gets improved by Self- Medication	3 (0.98%)	8 (2.61%)
Doctors prescribe me High potent drugs not safe for my health	27 (8.82 %)	23 (7.51%)
I can't buy all the prescribed medicines	8 (2.61%)	21 (6.86%)

Table 10: Reasons behind Self-Medication Practice by Gender n=306.

In Table # 11, we listed some of the symptoms leading to Self-medication Practice, Sources behind Self-Medication practice as shown below.

Symptoms Lead to Self-Medication	Males n(%)	Females n(%)
Fever	12 (3.92%)	7 (2.28%)
Cough	13 (4.24%)	0 (0%)
Headache	81 (26.47%)	118 (38.56%)
Muscle Pain	11 (3.59%)	0 (0%)
Skin Infections	2 (0.65%)	8 (2.61%)
Flu	0 0%)	23 (7.51%)
Abdominal Pain	11 (3.59%)	20 (6.53%)
Sources behind Self-Medication		
Opinion of a Friend	15 (4.90%)	24 (7.84%)
Advertisements/Leaflets of drugs	37 (12.09%)	48 (15.68%)
Pharmacist's advice	25 (8.16%)	29 (9.47%))
The opinion of Family Members	17 (5.55%)	40 (13.07(%)
Internet and Social Media	36 (11.76%)	35 (11.43%)

Table 11: Symptoms Leading to Self-Medication Practice, Sources behind Self –Medication practice concerning Gender n=306.

In Table 11, Females had the greatest incidence of Headache symptoms (38.56%) than males (26.47%). Similarly, also in table 11, Influence by advertisement campaigns given by the Pharmaceutical companies is greatest among females (15.68%) than males (12.09%).

Variable	Males n(%)	Females n(%)
Awareness about Migraine	95 (73.07%)	155 (88.06%)

Table 12: Awareness about Migraine by Gender n=306.

In Table 12, Females have a greater awareness ratio (88.06%) than males (73.07%). So we get a greater awareness of Migraine in Multan's Community.

In Table 13, the various Food triggers of Migraine concerning Gender n=306 which is shown below.

Food Trigger's Variables	Males n(%)	Females n(%)
Chocholate items	71(23.20%)	99(32.35%)
Caffeine withdrawal	8 (2.61 %)	27 (8.82%)
Chinese Salt products	14 (4.57%)	17 (5.55%)
Cold drink	13 (4.24%)	13 (4.24%)
Spicy food products	5 (1.63%)	16 (5.22%)
Diet food	19 (6.20%)	4 (1.30%)

Table 13: Distribution of Food Triggers of Migraine concerning Gender n=306.

In above table 13, the major food trigger both for females and males was Caffeine withdrawal (32.35%) and (23.20%). Similarly, Diet food trigger was highest for males (6.20%) after chocolate items.

Environmental Trigger's Variables	Males n(%)	Females n(%)
Strong smells	12 (3.92%)	39 (12.74%)
Cold airstrike on head and face	13 (4.24%)	21 (6.86%)
Flickering lights	33 (10.78%)	55 (17.97%)
Weather changes as well as Hot season	13 (4.24%)	13 (4.24%)
Cigarette's smoke	11 (3.59%)	15 (4.90%)
Loud noises	48 (15.68%)	33 (10.78%)

Table 14: Distribution of Environmental Triggers concerning Gender n=306.

In Table 14, the strong smells ratio was greater for females (12.74%), but in Males, the ratio of loud noises was greater (15.68%) than Females.

Psychological Triggers' Variables	Males n(%)	Females n(%)
Skipped Meals	20(6.53%)	33(10.78%)
Stress	31(10.13%)	39(12.74%)
Insufficient sleep	24 (7.84%)	22 (7.18%)
Disturbances in Menstrual cycle	0 (0)	31(10.13%)
Use of Mobile phones and T.V	26(8.49%)	27 (8.82%)
Eye sight weakness	29 (9.47%)	24 (7.84%)

Table 15: Distribution of Psychological Triggers concerning Gender n=306.

In Table 15, the Stress ratio was greater for Females (12.74%) whereas in Males also the ratio of Stress was greater (10.13%). The females also reported Disturbances in the Menstrual cycle (10.13%).

Limitations

There are various kinds of limitations connected with our Cross-sectional study. As our study is a cross-sectional study, so the temporary connections of different nature may not be recognized efficiently. Another limitation is that we only survey Multan's Community people so it is not considered to be a global-based community survey. Due to Corona Outbreak in Multan, we in the end collected our Patients' Data from the Students of different colleges and universities in Multan city which were well aware of the causes, its Self- medication practices as well as management of migraine's treatment plans that do not match with our required cross-sectional study fundamental requirements. In our study, we do not include such questions regarding the onset of diagnosis, duration as well as frequencies of Migraine Aura and Migraine without Aura like symptoms. Moreover, our study is also limited due to its small sample size and lack of randomization.

Discussion

Our study aimed to assess the Self-medication practice and disease awareness about Migraine in Multan's Community. In our study, we have shown that up to (61%) males do not consult any physicians while (87%) females do not consult any doctors for their proper treatment of disease. While also self-medication Practice among males and females were very highest. Now we discuss these parameters stepwise.

Effect of Migraine on Gender

It was shown in our study that females have done a greater practice of Self-Medication by allopathic drugs than males' self-medication practice because they have a greater incidence of Migraine attacks. Studies showed that it was due to disturbances in the levels of Estrogen hormones due to various reasons during the puberty phases of females that resulted in the release of Chemical triggers for Migraine symptoms [10]

Environmental Triggers and Migraine

As already being discussed in detail in the Results Section (Table 7), Environmental Triggers also showed a great direct effect on the release of specific endogenous chemicals for migraine. Our study was conducted in Multan City which is most famous for its highest summer season in the whole year. Various studies confirmed as well as contravened that the hot season may or may not be a triggering factor for migraine symptoms. A similar study, that showed that the risk of migraine symptoms increases by 7.5% for every 9^0F (Fahrenheit) increase in average day temperature however lower barometric air pressure and air pollution have not so many significant effects [11]. Similarly Cigarette smoking, as secondary sources of smoking, and other related triggers as already being discussed also act as efficient sources for the release of Migraine's triggers (Table 14).

Food Triggers and Migraine

The details of food triggers are already mentioned in the Results' Section (Table 13) with their incidences in patients. Chocolate items tend to cause migraine-related symptoms because it contains tyramine containing products that act as triggers. Similarly, Caffeine Products and Fried and spicy

products (having the highest content of cholesterol that increases blood flow to the brain) also act as efficient triggers for migraine symptoms. Similarly, carbonated sodas and diet food items also contain a high content of Caffeine. Most of the people in Pakistan psychologically rely upon Caffeine products to relieve their Migraine symptoms [12]. Similarly, withdrawal of caffeine products and Chinese products also act as strong Migraine's triggers (Table 13).

Psychological Triggers and Migraine

Various psychological triggers with their incidences are already being discussed (Table 14). Skipped Meals is the major one because it results in a low supply of glucose to the brain and other essential nutrients for proper functioning. Similarly, eyesight, the constant use of mobile results in vomiting symptoms. Also, fatigue, insufficient sleep, and disturbances act as minor psychological triggers (Table 15).

Conclusion

Migraine cases as well as Self-Medication practice ratio were the most common among females than males (Table 7). Since most of the patients in our study are in Grade IV (severe disability) of (Migraine Disability Assessment Score) which have affected the healthy lifestyle standards as well as academic results of patients (Tables 2-4). Despite its high prevalence globally, patients most of the time do not seek help from medical professionals due to low awareness (Table 12). Therefore, it is the need of time not only to discuss the exact reasons behind Migraine problems with the patients but also to improve the healthy lifestyle (Physical and Mental) and their Academic performances in their educational fields. Findings of this study strongly recommend that there should be Efficient, Reliable, and Standard Awareness campaigns made by Federal Health care facilities to be made and implemented all over the country according to National and International Guidelines by the World Health Organization that should exactly find out the Sources that resulted in severe symptoms of Migraine in healthy persons. Proper Educational Counselling Sessions must be developed by Neuro physicians that should be mandatory for each patient to attend if he/she faces the severe symptoms of Migraine in his/her healthy life span years. Moreover, Neurological Management Treatment Plan courses should be made and must be included in medical fields' syllabus according to Standard Treatment Guidelines so that any Health care physician, as well as Pharmacists, could easily manage as well as counsel the patients of Migraine and also aware their patients in an Efficient Manner. Moreover, there should be large good descriptive studies to support good strong evident data.

Recommendations

There are two types of interventions. First, is the Psychotherapeutic Interventions and second is the Institutional Interventions. In Psychotherapeutic Interventions, such interventions should be included that showed positive outcomes with Patients' healthy status with the help of Neuro physicians, Pharmacists, Physicians, Nurses, and others. In such interventions, Patients' health care plans should be made by reviewing the National and International Treatment Guidelines and Counselling sessions should be planned and arranged so that Physicians and Patients could easily participate in them. By that, Physicians could understand this highly prevalent deadly disease efficiently and also give awareness to their patients in a most suitable manner.

In Institutional interventions, Medical Institutions should take responsibility to include Current Management Headache Plans in their respective syllabus by giving the efficient Policy guidelines to the Higher Education Commission of Pakistan.

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