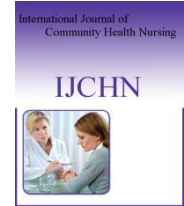




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IMPACT OF MIGRAINE ON ACADEMICS AND DAILY FUNCTIONING AMONG ADOLESCENTS

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ABSTRACT

Migraine is a common neurological disorder among adolescents and is increasingly recognized as a significant health concern due to its potential impact on academic performance and daily functioning. Recurrent migraine episodes, often accompanied by symptoms such as nausea, photophobia, and difficulty concentrating, can interfere with school attendance, classroom participation, extracurricular involvement, and routine daily activities, thereby affecting overall wellbeing and educational progress. The present study aimed to assess the prevalence of migraine among adolescents and its impact on academic performance and daily functioning. The objectives of the study were to assess the prevalence of migraine among adolescents, measure the impact of migraine on academics and daily functioning, and find out the association between migraine and selected socio-demographic variables. A descriptive survey design was adopted for the study and data were collected from 120 adolescents studying in MGM Model School, Ayiroor, Varkala using convenience sampling technique. The research tool consisted of three sections: demographic variables, a standardized migraine assessment scale to identify prevalence and severity, and an academic and daily functioning checklist to evaluate the impact on school attendance, concentration, participation in extracurricular activities, and routine daily tasks. The data were analyzed using descriptive and inferential statistics. The findings revealed that 38.33% of adolescents were experiencing migraine. Regarding academic impact, 64.16% experienced mild impact, 21.67% moderate impact, and 14.17% severe impact. In terms of daily functioning, 61.67% reported mild impact, 25.83% moderate impact, and 12.50% severe impact. A statistically significant association was found between migraine and selected socio-demographic variables such as age, sex, religion, family history of migraine, and screen time (academics) and sex, religion, monthly family income, family history and screen time (daily functioning).

Key Words: Prevalence, Migraine, Impact, Academics, Daily Functioning, Adolescents.

INTRODUCTION

Migraine is being recognized as a significant health problem affecting the quality of life and a major cause of morbidity among young adults specially students, and one of the major health-related resource consumers. Migraine is a recurrent type of headache characterized by throbbing pain that may occur on one or both sides of the head. It is often associated with nausea, vomiting, loss of appetite, and sensitivity to light. Migraines may occur with

or without aura and are linked to dysfunction of the neurological and autonomic nervous systems, with a strong family history. The impact of migraine on adolescents extends beyond physical pain and includes substantial impairment in academic performance and school participation. Recurrent migraine attacks often lead to school absenteeism, difficulty concentrating in class, reduced attention span, and impaired memory and learning abilities. Sensitivity to light and sound can make classroom



environments challenging, while associated symptoms such as nausea, fatigue, and visual disturbances further interfere with academic activities. As a result, adolescents with migraine may experience declining academic performance, increased stress related to studies, and reduced participation in extracurricular activities. Understanding the impact of migraine on adolescents' academic performance and daily life is essential for early identification, appropriate management, and the development of supportive school-based and family-centred interventions aimed at improving quality of life and educational outcomes.

MATERIAL AND METHODS

Quantitative research approach with descriptive survey design was adopted for this study. The sample size used in this study were 120 adolescents aged 13 and 14 years studying in MGM Model School, Ayiroor, Varkala. The sampling technique used for the study was convenience sampling technique. Ethical clearance taken from institutional ethics committee of Sivagiri Sree Narayana Medical Mission College of Nursing, Varkala.

Sample Size Calculation:

Sample size was calculated by the following formula.

Sample size calculation, $n = 4pq/d^2$

$$p=25.7$$

$$q=100-p$$

$$=100-25.7=74.3$$

$$d=8$$

$$n=4pq/d^2$$

$$=4 \times 25.7 \times 74.3 / (8)^2$$

$$=7638.04/64$$

$$=119.34$$

The sample of the study will be 120

Inclusion Criteria:

Those who are present at the time of data collection.

Exclusion Criteria:

Those who are not willing to participate in the study.

Procedure methodology:

In this study the investigators used self-prepared tool to assess prevalence of migraine and its impact on academics and daily functioning among adolescents. Data regarding socio demographic, prevalence of migraine and its impact on academics and daily functioning among adolescents were collected using checklist.

The tool consists of three sections:

Section A: Socio demographic variables

Sociodemographic variables include age, gender, class, gender, class, area of residence, type of family, educational status of father, occupation of father,

educational status of mother, occupation of mother, monthly income, family history of migraine and average screen time usage.

Section B: ID Migraine Test

The ID-Migraine Test is a validated self-administered screening tool designed to quickly identify migraines. It is not a diagnostic test; however, it helps in the early identification of migraine based on common associated symptoms.

The test consists of five questions related to characteristics of headache and associated symptoms. Respondents rate their confidence for each item on the test.

Scoring and interpretation

Adolescents who score 3 or more "Yes" responses are considered likely to have migraine.

Section C: Checklist to assess the impact of migraine on academics and daily functioning among adolescents

The checklist is divided into two main sections:

Section 1: Migraine and academic impact assessment

This section includes 7 items. The score is graded as:

0-2: Mild impact

3-5: Moderate impact

6-7: Severe impact

Section 2: Migraine and daily functioning impact assessment

This section includes 7 items. The score is graded as:

0-2: Mild impact

3-5: Moderate impact

6-7: Severe impact

Statistical analysis

Chi-square test was used to find out the association between impact of migraine with the selected socio demographic variables.

RESULTS

Section I: Socio demographic variables.

The majority of participants (69.17%) belonged to the age group of 14 years. Most of the participants (57.5%) were females. A large proportion of adolescents (77%) were Hindus. About 55% of the adolescents were studying in class IX. Majority of adolescents (80%) were residing in rural area. A large proportion of adolescents (58.33%) belongs to nuclear family. The majority of the participants father's (81.67%) had educational qualification of degree and above. The majority of the participants mother's (89.17%) had educational qualification of degree and above. 59.17% of participants father's working in private sector. Nearly half (48.33%) of participants mothers are housewives. About 65.83% of participants have monthly family income of more than Rs. 30000. Nearly half



(51.67%) of participants have the family history of migraine.

Section II: Prevalence of migraine.

38.33% of adolescents are having migraine.

Section III: Level of impact of migraine in academics and daily functioning.

The majority (64.16%) of the adolescents have experiencing mild impact of migraine on academics. 1.67% of the adolescents were experiencing moderate impact of migraine on academics. A smaller proportion (14.17%) reported experiencing severe impact of migraine on academics.

Majority (61.67%) of the adolescents have experiencing mild impact of migraine on daily functioning. 25.83% of the adolescents were experiencing moderate impact of migraine on daily functioning. A smaller proportion (12.50%) reported experiencing severe impact of migraine on daily functioning.

Section IV: Association between impact of migraine on academics and daily functioning with selected socio demographic variables.

The Chi-square shows that there was statistically significant association between sex, religion, family monthly income, family history and screen time ($p < 0.05$) and there was statistically no significant association between type of family, education of father, education of mother, occupation of father, occupation of mother, class of studying, area of residence, ($p > 0.05$)

DISCUSSION

The first objective of the study was to assess the prevalence of migraine among adolescents. The result shows that 38.33% of adolescents are having migraine. The above finding was supported by the study conducted by Owolabi R O, O Emikpe A, Abdulkadir Shehu A, Musa A A to explore the prevalence and predictors of migraine among community health students in Kano state, Nigeria (2025). The sample size was 401 participants using an online pretested questionnaire. The ID-Migraine test indicates a 25.7% prevalence of migraine. The prevalence was higher among those who were female (28%) single (96%) and family history of migraine (79%).

The second objective of the study was to measure the impact of migraine on academics and daily functioning among adolescents.

The third objective of the study was to find out the association between migraine among adolescents and selected demographic variables. The Chi-square shows that there was statistically significant association between sex, religion, type of family, education of father and mother, occupation of father and mother, family monthly income, family history, screen time ($p < 0.05$) and there was

statistically no significant association between age, class of studying, area of residence, ($p > 0.05$).

The above finding were supported by an analytical cross-sectional study was conducted by Asmaa Mohammed Abo Elela, Soso Shawky Mohamed, Rahil Abdulaziz M Aboareef et al. in Abha, Saudi Arabia (2025) on migraine prevalence, determinants and impact on academic life among King Khaled University students; The study was conducted among 732 students from colleges of Medicine, Pharmacy, Engineering and computer science. They used a self-administered questionnaire, including the ID Migraine screening tool, which was administered either through an online survey or face-to-face convenience and snowball sampling methods were adopted to recruit participants. The study demonstrated that 44.1% of the university students were suffering from migraine. A high prevalence of migraine was noticed among the students female sex, working besides education, low family income, chronic diseases and family history of migraine were the main determinants of migraine. Migraine had substantial impact on student's daily activities and academic practices.

CONCLUSION

Migraine is a common and significant health problem among adolescents, with a considerable prevalence in this age group. The findings of the study reveal that migraine not only affects the physical well-being of adolescents but also has a major impact on their academic performance and daily functioning. Frequent migraine attacks contribute to reduced concentration, absenteeism from school, poor academic achievement, and difficulty in completing daily activities. In addition, migraine can lead to emotional distress, fatigue, and decreased participation in social and recreational activities. The present study was carried out to assess prevalence and impact of migraine among adolescents. The following conclusion were drawn based on the findings of the study. The result showed that, out of 120 samples, 64.16% adolescents had mild impact of migraine on academics, 21.67% adolescents had moderate impact of migraine on academics, 14.17% adolescents had severe impact of migraine on academic, 61.67% of adolescents had mild impact of migraine on daily functioning, 25.83% of adolescents had moderate impact of migraine on daily functioning and 12.50% adolescents had severe impact of migraine on daily functioning. The significant association found between impact of migraine on academics and daily functioning with selected socio demographic variables includes religion, type of family, education of father and mother, occupation of father and mother, family monthly income, family history, screen time ($p < 0.05$).

Conflict of Interest: Nil

Source of Funding: Group

Ethical Clearance: Taken from institutional ethics committee of Sivagiri Sree Narayana Medical Mission



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