

Impact of migraine on work productivity and healthcare costs in Malaysia: a retrospective, cross-sectional analysis using self-reported data from the Migraine-Buddy© application

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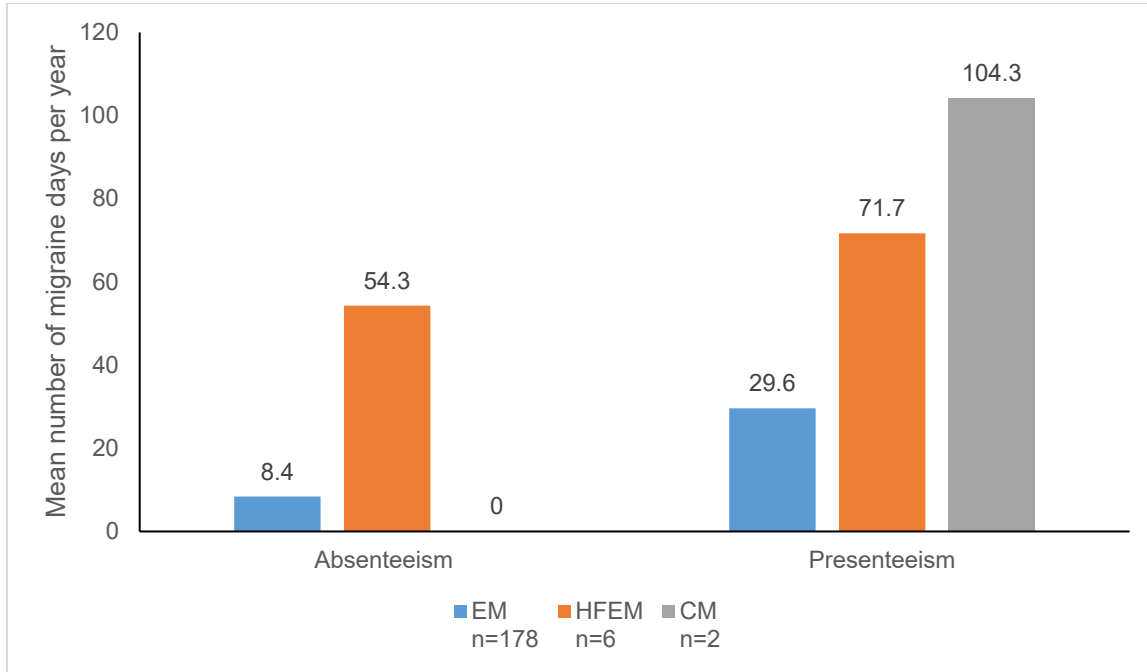
Objective: To evaluate the impact of migraine on work productivity and healthcare costs using the self-reporting Migraine-Buddy© application in Malaysia.

Methods: In this retrospective analysis, the most recent 28-day data captured from adult, self-diagnosed individuals with migraine from registration date on the application (in the 12-month study period; Feb 2020–Jan 2021) were analysed. Patients were stratified by frequency of monthly migraine days (MMD) as episodic migraine (EM; 4–7 MMD), high frequency EM (HFEM; 8–14 MMD) and chronic migraine (CM; ≥ 15 MMD). Primary endpoints (absenteeism and presenteeism) and secondary endpoints (healthcare cost, demographic characteristics, incidence of anxiety/depression, pain intensity, migraine attack duration) were summarised descriptively.

Results: Of 986 records, 362 patient's data (EM=348, HFEM=10, CM=4) was analyzed. The mean days of absenteeism and presenteeism/year were 9.8 and 31.7 days, respectively, and the mean days increased with increase in MMD (**Fig 1**). Results of secondary endpoints are presented in **Table 1**. The burden of healthcare costs for most patients was in the range of RM100–RM299 for physician visits, over-the-counter and alternative medications. About a quarter of patients reported anxiety (23.5%) and depression (26.2%). Majority of the users reported migraine attack duration of 8h–<1day.

Conclusion: Migraine can considerably affect work productivity of employed patients and increase the burden of healthcare cost.

Figure 1: Mean number of migraine days per year reported as absenteeism and presentism by Migraine-Buddy© users who were considered employed



Note: Included users who had at least 1 day of absenteeism/presenteeism in the most recent 28-day period in the study population criteria

CM, chronic migraine; EM, episodic migraine; HFEM, high-frequency EM

Table 1. Secondary endpoints reported using data from Migraine-Buddy© users

Demographics	EM (4–7 MMD) n=348	HFEM (8–14 MMD) n=10	CM (≥15 MMD) n=4
Age, mean (SD)	29.8 (8.88)	24.7 (5.86)	NA
Sex, n (%)			
Male	18 (5)	2 (20)	0
Female	142 (41)	4 (40)	3 (75)
Unknown	188 (54)	4 (40)	1 (25)
Monthly migraine days, mean (SD)	4.4 (0.65)	10.1 (1.52)	20.8 (5.91)
Healthcare costs, n (%)	EM n=28	HFEM n=16	CM n=4
Physician visits			
RM100- RM299	21 (75)	8 (50)	2 (50)
RM300- RM599	4 (14)	1 (6)	1 (25)
RM600- RM999	2 (7)	2 (13)	0
≥RM 1000	1 (4)	5 (31)	1 (25)
Over-the-counter medications			
RM100- RM299	23 (82)	11 (69)	4 (100)
RM300- RM599	4 (14)	3 (19)	0
RM600- RM999	1 (4)	1 (6)	0
≥RM 1000	0	1 (6)	0
Alternative medication			
RM100- RM299	24 (86)	13 (81)	3 (75)
RM300- RM599	3 (11)	2 (13)	1 (25)
RM600- RM999	1 (4)	0	0
≥RM 1000	0	1 (6)	0
Pain intensity in migraine records, n (%)	EM n=928	HFEM n=24	CM n=34
No pain (0)	3 (0.3)	0	0
Hurts a bit (1-2)	81 (9)	2 (8)	3 (9)
Mild	235 (25)	7 (29)	6 (18)
Moderate (5-6)	320 (35)	3 (13)	11 (32)
Severe (7-8)	200 (22)	6 (25)	13 (38)
Hurts worst (9-10)	74 (8)	6 (25)	1 (3)

CM, chronic migraine; EM, episodic migraine; HFEM, high-frequency EM; MMD, monthly migraine days;

NA, not applicable; SD, standard deviation

Disclosures:

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