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Scientific Medical Journal Reading Habits in Medical Students: A Cross-Sectional Study at AMC/PGMI, Lahore, 2023

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ABSTRACT

Objective: Scientific medical journals are peer reviewed and have revolutionized the world of learning for medical students. They can significantly contribute to better learning of the medical students. To assess the scientific journal reading habits in relation to the place of residence, gender, and monthly family income of medical students at Ameer ud Din Medical College. **Study Design:** Cross-sectional study. **Settings:** The study was conducted at Ameer-Ud-Din Medical College, Lahore Pakistan. **Duration:** 6 months from 20th March 23 to 20th September 23. **Methods:** Informed verbal consent was taken from 227 students selected through simple random sampling. Analysis was done using SPSS version 25. **Results:** The average age of the participants was 21.85±1.35 years.142/227(62.6%) of the participants, including 78/142(54.93%) females and 64/142(45.07%) males were reading scientific medical journals regularly. Only 19/227(8.4%) preferred printed journals. 122/142(85.92%) regular journal readers were urban residents while 20/142(14.08%) of the regular journal readers had a permanent residence in rural areas. **Conclusion:** Online journals were the preferred medium for 62.6% students compared to printed journals. A greater number of female students read scientific medical journals compared to male students.

Keywords: Scientific medical journals, Reading habits, Medical students.

INTRODUCTION

Medical journals are publications that convey information related to medical and health sciences.[1,2] They are a class of scientific journals. Medical journals are peer reviewed which means the work published in the journal is reviewed by experts in the field prior to publication.[3] Scientific medical journals have revolutionized the world of learning for medical students and now form an important source of information for those in search of the latest and up to date information related to the medical field.[4] An exponentially large number of discoveries in the field of medicine in the past few decades have led to the dynamically enhanced volume of medical knowledge.[1,5] To deal with the learning of this extensive amount of information, the curriculum employed by medical schools involves both theoretical as well as clinically applied knowledge. However, the fact that this knowledge is experiential rather than taught renders necessary the existence of habits that allow the medical professionals and students to remain in touch on a daily basis with the innovations in the field.[6] Reading medical literature is one such habit that enables medical students and professionals to develop the level of expertise required in modern practice.[7,8] Reading not only helps in the retention and application of useful knowledge but it also provides the explorative view of other physicians' practice.[9] Although acquiring knowledge through reading makes intuitive sense,[9] yet the extent of incorporation of this act as a habit in the medical students, particularly of Pakistan, remains unrevealed. Numerous accessible study resources including textbooks, medical journals (printed and online), newspapers, medical software, online books and articles are available to the medical students.[10,11] In Pakistan, an integrated medical curriculum is employed where all the important and broad areas of medical knowledge are touched in order to facilitate the students to become necessarily equipped for practice.[8] However, for the retention and better application of the existing as

well as new knowledge, reading other than textbooks is essentially required.[11] An important dimension in the dispensation of knowledge through reading involves medical software and online journals.[12] Medical software is another accessible source of information that can be used by medical students.[13,14] Various types of medical software are available with each providing extensive readable as well as visual aids about different medical topics.[15] With the advent of such diverse means of information, medical students have a broad list of choices to select from, for acquisition of knowledge and information, to help them learn and adopt the best mannerisms of clinical practice. The habits of the usage of these different means, individually and combined, by medical students however remains unanalyzed. A cross-sectional study was conducted in 2021 which involved the students from two medical universities in Malaysia and Japan. It was found that 50% of the medical students who were included as participants in the study preferred digital sources of reading for their syllabus as well as to support their habit of reading scientific journals and individual articles.[16] A study done in Australia involved students from all medical colleges across the country. 83.3% of the respondents stated that their institution had a journal club. 57.1% stated that the journal clubs had the primary aim of teaching critical appraisal skills to the participants.[17] A similar study included the young medical professionals in Pakistan. It was demonstrated that among the respondents, 40% read printed journals, 49% read online journals, 60% read case reports, and 55% read newspapers for 1–5 h per week. The study also found the preferred medical journal of the respondents was Pakistan Journal of Cardiology & Thoracic Surgery. It was concluded that the young medical professionals in Pakistan did spend a reasonable amount of time gaining information through reading. Online sources of medical information were preferred over the printed ones by the respondents.[18]

The objective of the study was to assess the scientific journal reading habits in relation to the place of residence, gender, and monthly family income of medical students at Ameer-Ud-Din Medical College.

Operational Definitions:

Scientific Medical Journals: All indexed journals whether available online or in printed form.

Scientific Medical Journal reading habits: These will be assessed based on whether students read the scientific journals or not, their preference regarding source of journals, time spent on journal reading per week, per week articles read, publications and subscriptions to any scientific medical journal.

METHODS

Study Design: This Cross-sectional survey was conducted at Ameer-Ud-Din Medical College, Lahore Pakistan. The duration of the study was 6 months from 20th March 23 to 20th September 23. Simple random sampling technique was used. Students from all 5 years of study were taken and assigned numbers starting from the first roll number of the first year. The total number of students was 548. Students were selected by lottery method till the required sample size was reached.

Taking population size as 548, with a 95% confidence level and margin of error as 5%, the sample size was calculated to be 227 by the given *formula*:[19]

$\boldsymbol{n} = \frac{NZ^2P(1-P)}{d^2(N-1)+Z^2P(1-P)}$ n= sample size, N= population size, Z= level of confidence, P= expected prevalence, and d= precision (corresponding to effect size).

The medical students enrolled in the MBBS degree from all 5 years of study as students of Ameer-ud-Din Medical College affiliated with Lahore General Hospital, who gave informed consent and not having any ophthalmological issue like lazy eyes which made reading on screen difficult.

Ethical approval was taken vide letter no. ERC no.00-28-A-2023 and the data was gathered using a predesigned structured questionnaire by the researchers themselves after achieving informed consent. The questionnaire contained only close ended questions.

The SPSS version 25.0 was used for data analysis. Mean and standard deviation was calculated for quantitative variables like age. Frequencies and percentages were calculated for categorical variables like age categories, gender, monthly family income categories and journal reading habits including preferred sources of journal reading, categories for weekly time spent reading journals, categories for number of articles read per week, subscription of any journal and categories for number of publications. Tables and charts were used for data presentation. Chi square test of significance was used to assess any relation between place of residence, gender, and monthly family income of the students with their journal reading habits. A p value of less than 0.05 was taken as significant.

RESULTS

The study subjects included a total of 227 with 126 females and 101 males. The average age was 21.85 years with a standard deviation of 1.35. Married participants were 6 (2.6%) and 87% had a permanent residence in urban areas. 49.3% (112) had a monthly household income above 100,000 rupees. 37.5% (85) had a monthly household income between 50 to 100,000 rupees and

13.2% (30) of the participants had a monthly household income less than 50,000 rupees. Out of the total, 167 of the participants (74%) said they read scientific medical journals regularly. However, only 19(8.4%) said they preferably read printed journals,106 (46.7%) read online journals and 102(44.9%) read both online and printed journals. Out of those participants who read journals, 58(25.6%) spent between 1 to 5 hours on journal reading per week, 15(6.6%) spent between 5 to 10 hours on journal reading per week and 1(0.4%) participant spent more than 10 hours on journal reading per week. 192(84.6%) participants read less than 5 articles per week. 25(11.0%) participants read between 5 to 10 articles per week. 4(1.8%) participants read between 10 to 15 articles per week and 6(2.6%) participants read more than 15 articles per week. 192(84.6%) participants had no research publication. 25(11.0%) participants had between 5 to 10 research publications and 10(1.8%) participants had more than 10 research publications. 45(19.8%) participants had a subscription of any scientific medical journal whereas 182(80.2%) had no such subscription. Cross tabulation between gender and journal reading habits revealed that 78 females and 64 males read scientific medical journals. Cross tabulation between monthly household income and journal subscription revealed that 5 participants with less than or equal to a monthly household income of 50,000 rupees had scientific medical journal subscription. While 45 participants with a monthly household income above 50,000 rupees had subscribed to scientific medical journals.

Table 1: Sociodemographic variables

Variables		Frequency (N)	Percent (%)
Age	18	6	2.6
	19	7	3.1
	20	19	8.4
	21	44	19.4
	22	76	33.5
	23	59	26.0
	24	12	5.3
	25	4	1.8
	Total	227	100.0
Gender	Male	126	55.51
	Female	101	44.49
	Total	227	100
Monthly Income	<50,000	30	13.2
	50,000 - 100,000	85	37.5
	>100,000	112	49.3
	Total	227	100.0
Marital Status	Married	221	97.4
	Unmarried	6	2.6
	Total	227	100.0
Residence	Urban	197	87
	Rural	30	13
	Total	227	100

Table 2: Journal reading habits

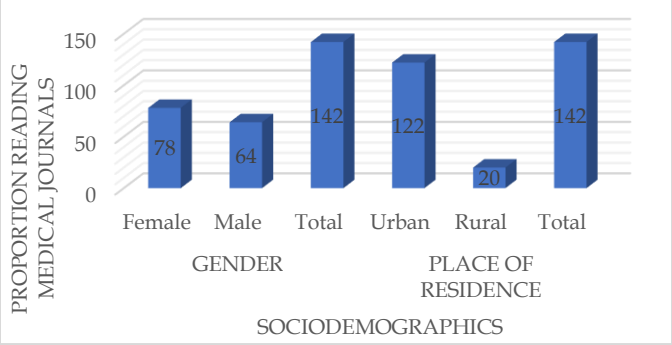
Variables		Frequency	Percentage
Journal reading	Yes	142	62.6%
	No	85	37.4%
	Total	227	100%
Participants preference for source of journals	Printed	19	8.4%
	Online	106	46.7%
	Both	102	44.9%
	Total	227	100%
Time spent on journal reading per week	0 hours	153	67.4%
	1-5 hours	58	25.6%
	5-10 hours	15	6.6%
	> 10 hours	1	0.4%
	Total	227	100%
Articles read per week	< 5	192	84.6%
	5-10	25	11.0%
	10-15	4	1.8%
	> 15	6	2.6%
	Total	227	100%
Total number of publications	No publication	192	84.6%
	5-10	25	11.0%
	More than 10	10	1.8%
	Total	227	100%
Subscription to any research journal	Yes	45	19.8%
	No	182	80.2%
	Total	227	100%

Cross tabulation between place of permanent residence and journal reading habits revealed that 122 urban residents amongst the participants read scientific medical journals regularly while 20 of the participants who had permanent residence in rural areas read scientific medical journals regularly. Relation between gender, place of residence, monthly family income and journal reading habits based on p value was not significant.

Table 3: Monthly household income & journal subscription

Variable		Journal Subscription	
		Yes	No
Monthly Household Income	≤ 50,000 Rupees	05	25
	> 50,000 Rupees	40	157
	Total	45	182

Figure 1: Journal reading habits versus socio-demographics



DISCUSSION

The average age of the students was 21.85± 1.35 years whereas the mean age of Saudi students in a similar study was 22.9 ±0.9 years.[20] 55.5% of the participants were female and 45.5% were male compared to 71.2% of female participants in a study in Srilanka.[21] 87% of the participants were urban residents. 49.3% (112) had a monthly household income above 100,000 rupees.167 of the participants (74%) said they read scientific medical journals regularly compared to 93.9% of the participants in another study.[22] However, only 19(8.4%) said they preferably read printed journals whereas 40% participants read printed journals in another study.[15] According to the same study, 40% respondents read journals for 1-5 hours every week while in our study, 58 participants (25.6%) spent between 1 to 5 hours on journal reading per week.[15] 192 participants read less than 5 articles per week. 25 participants read between 5 to 10 articles per week. 4 participants read between 10 to 15 articles per week and 6 participants read more than 15 articles per week. In another study 33.2% of the participants read 0 articles per week.[20] In our study,192 participants had no research publication whereas in a study in Karachi, 58.3% of the participants had published at least one article in a research journal. [21] 45 participants (19.8%) had a subscription of any scientific medical journal compared to 11.6% of participants in another study. [22]

CONCLUSION

Majority of the participants read scientific journals regularly. However, most students preferred online journals compared to printed journals. Most of the participants had no research publication. 20% of the participants had subscribed to any medical journal. For ease of the students and to promote journal reading culture, efforts need to be made at institutional level.

LIMITATIONS

Lack of funding resulted in student researchers spending money out of their pockets for paperwork and questionnaire/proforma printing. Time constraints resulted in limited time for data collection, entry, and analysis.

SUGGESTIONS / RECOMMENDATIONS

It is essential that medical students be provided with access to scientific medical journals on campus to encourage reading. Yearly surveys should be conducted to gauge the reading habits of medical students to enhance their learning.

CONFLICT OF INTEREST / DISCLOSURE

None.

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