

## SUMMARY

University students today are the future leaders of tomorrow. Student health is an important prerequisite to academic and personal development.

University medical centers in Sri Lanka provide primary medical care to all students free of charge. The author noticed that the number of students attending the medical centre had been increasing and carried out a preliminary inquiry into the workload of university medical officers. Out of the 10 medical officers who were contacted over the telephone, 8 stated that they find it difficult to cope with the workload. They were of the view that the students who consult frequently add substantially to the workload and such students are a considerable source of stress to them.

Although frequent consulters in general practice are few in number, they consume a disproportionate amount of practice resources. Often, they are referred to specialists and are subject to numerous investigations. Many studies carried out in general practice settings have demonstrated that frequent consulters contributed to about one third of the workload of doctors. In these studies some characteristic of frequent consulters, such as socio-demographic factors, health related habits, medical and psychological aspects were shown to be associated with frequent consultations. However, the author failed to locate any study which had investigated frequent consulters among undergraduates. The present study was undertaken to investigate frequent consulters among undergraduates attending a university medical centre in Sri Lanka.

Aims of the present study were to assess the effect of frequent consultations among undergraduates on the workload of university medical officers and to determine the characteristics of such frequent consulters.

Frequent consulters were defined as the top 10% of all consulters. This method used by Westhead (1985) for the definition of a frequent consulters was thought to be better than using the number of visits over a period of time as used by other researchers (De Silva, 1989; Karlsson, 1994; Sumatipala, 1996). Selecting the top 10% was also useful in getting a larger sample size than if only the top 3% (Neal et al, 1998; Howe et al, 2002) had been taken. Westhead concluded that "since the top 10% of consulters generate over 30 % of all consultations they are worthy of careful consideration in any study of the workload of general practice".

The study was carried out in two phases. In phase I of the study frequent consulters were identified. The study sample consisted of students belonging to academic years 1997 and 1998 who had consulted university medical officers at least once in the 12 months preceding 31<sup>st</sup> August 1999. Their medical records were scrutinized and the number of consultations by each student during that time was estimated. The top 10% consulters were identified and considered as frequent consulters and all others were considered as non-frequent consulters. The results showed that frequent consulters contributed to 30 % of all consultations. It was also found that they had consulted 9 or more times in the preceding 12 months. Two hundred and twenty four frequent consulters were identified.

Phase II of the study was a case control study which was started in December 1999 to identify the characteristics of frequent consulters. The cases and controls were

investigated at their first consultation (index consultation) during the study period which lasted approximately 6 months. Of the 224 frequent consulters, identified in phase I, 164 (73%) consulted during the study period and all were recruited as cases. Every 5<sup>th</sup> non-frequent consulter after a frequent consulter was recruited to the group of controls. All expressed their consent and thus, the response rate was 100%.

Socio-demographic and personal data was gathered using a self-administered questionnaire designed by the author. Psychological disturbance among cases and controls were assessed using the translated and validated version of the General Health Questionnaire (GHQ) - 30. Study subjects completed the two questionnaires while waiting to see the doctor and handed them over to the examining doctor. Doctors conducted the consultations in the usual manner without looking at the completed questionnaires.

The doctors did not use the medical records of the study subjects and controls but used an encounter form designed by the author so that the doctors did not know whether they were seeing a frequent consulter or a non-frequent consulter. However, the doctors could request for a particular patient's medical record if they felt that more information was necessary to give optimal medical care to the patient. Nurses examined the medical records and entered details of known drug allergies in the encounter form before consultations. All these measures ensured that there was no risk to the patient, due to the doctor not having the medical record in front of him.

During consultations doctors defined health problems according to the inclusion and exclusion criteria given in the International Classification of Health Problems in Primary Care (ICHPIC) 2-Defined. At the end of each day medical records were inspected and information regarding chronic or recurrent diseases was

gathered. Reasons for encounter and problem definitions were classified according to the International Classification of Primary Care (ICPC)

During analysis, Chi<sup>2</sup> was used to assess the association between frequent consultations (outcome variable) and selected socio-demographic, personal, academic, medical and psychological characteristics (predictor variables). The predictor variables found to be significantly associated with frequent consultations in the bivariate analysis were cannabis use by the male students, loss of relationship with a girl/boyfriend, being a first year student, living away from home, being in employment in the preceding 12 months, not practicing self-care and high score on the GHQ (6 or more). All the above variables were then subject to multiple logistic regression analysis to reduce the effect of confounding. Gender, though not a significant predictor variable in the present study, was also included as it has been shown to be associated with frequent attendance in several studies carried out in general practice settings.

Characteristics that were significantly associated with frequent consultations were use of cannabis (OR= 4.12), loss of relationship with a girl/boyfriend (OR = 3.38), being a first year student (OR = 1.99) , being away from home (OR = 4.86), being in employments while studying in the preceding 12 months (OR = 3.68), not practicing self care (OR = 3.59 ), having chronic or recurrent physical illness (OR = 3.42) and high score on the GHQ (OR = 4.04). Gender was not found to be significantly associated with frequent consultations.

The present study showed that two thirds of the frequent consulters continued to be frequent consulters in the year following the period of survey. This highlights

the importance of planning strategies to manage frequent consulters.

The strengths and limitations of the study are the following. The size of the study sample is substantially larger when compared to some previous studies on frequent consulters. The response rate was 100%. The time factor did not permit investigating more than one control for a case. The socio-demographic and personal data was collected prospectively, using a self-administered questionnaire with a view to improving quality of the study. Self-administered questionnaire is a better instrument than an interviewer administered questionnaire when collecting data on sensitive areas such as personal data. The GHQ-30, a time honoured screening instrument which has been validated and used in variety of populations including university students, was used to detect psychological distress among the patients. Being unaware whether the patient was a frequent consulter or an infrequent consulter, would have reduced bias related to observations made by the doctors. The influence of the doctors previous knowledge of the patient on problem definition was minimized by doctors adhering to inclusion and exclusion criteria laid down in the ICHPIC 2 – Defined.

The fact that medical students, students in third and fourth years and the students who consulted doctors outside the university medical centre were not included in the study sample should be considered as limitations when generalizing the findings to university students in Sri Lanka.

In conclusion, the present study showed that the frequent consulters contribute substantially to the workload. It also identified a number of factors associated with frequent consultations. Among the socio-demographic factors found to be

significantly associated with frequent consultations were factors related to young adults namely, loss of relationship with a girl/boyfriend and cannabis use. Being from a rural area was suggestive but failed to reach statistical significance.

Factors related to academic aspects, namely, being a first year student, living away from home and being in employment while studying independently predicted frequent consultations. Students who did not practice self-care and those with chronic or recurrent physical conditions were significantly more likely to consult.

Half of the frequent consulters were psychologically distressed as shown by the high GHQ scores. The ability of the students to cope with stress can be a major determinant of their academic performance (Schreir and Abramovitch,1996). Recognition of frequent consulters with significant psychological distress is also important as it has been demonstrated that risk of suicide among these patients is high (Haste et al 1998).

Frequent consultations has an impact on doctors as well as the patients: they contribute substantially to the doctor's workload; on the other hand frequent consulters are subject to a large number of investigations and are referred to specialists without a clear indication .

The following recommendations could be made on the facts emanating from this study. Promoting self care, training practice nurses to attend to minor health problems, and introducing consultation through appointment system should reduce the workload of medical officers. Strengthening of counselling services and training of university medical officers to recognize and manage psychological distress are also

needed. University authorities should enhance the welfare services by improving living conditions and increasing the amount of financial assistance to deserving students.