Original Research Article

Tendency of Self-Medication among Various Malaysian Ethnicities

ABSTRACT

Aims: Self-medication has been observed in all kinds of societies regardless of region, religion, ethnicity and socioeconomic status. It is practiced by individuals as part of self-care for preventing or curing diseases. The main objective of this study is to assess the number of individuals involved in usage of over the counter drugs in Malaysia; as well as to assess if certain races in Malaysian population are more inclined towards the use of medication without prescription.

Study design: Cross sectional descriptive study

Methodology: A number of patients selected randomly from the outpatient department of SEGi University hospital, Malaysia participated in the study. Data was collected using a simple questionnaire. A total of 315 patients (166 male and 159 female) participated in the research and completed the designed questionnaire. The data collected was analyzed statistically using SPSS 20.0; appropriate statistical tests (Chi-Square and Fisher exact test) were applied. The *P value* (<0.01) was considered significant.

Results: In total, self-medication was practiced by 16.2% of participants. The trend was slightly higher in males (9.2%) than female participants (6.99%). Regarding ethnicity, the highest tendency was reported by patients of Indian origin. In Malaysian population, herbal medications were the most popular (66.66%), for the purpose of self-medication followed by allopathic drugs (22.22%). Considering the types of allopathic medications, oral analgesics remain the most popular drugs (60.56%) for self-medication among patient of all ethnicities.

Conclusion: The trend of self- medication is relatively less popular among Malaysians. However, a few individuals reported of practicing self-medication occasionally.

Keywords: Herbal medication; Oral analgesics; Self-care

1. INTRODUCTION

Medications are needed to overcome disease process either to cure the active diseases or for the prevention. Medications can be prescribed by the healthcare professionals (medicines on prescription) or individuals may have self-medication. The use of medication by an individual for the treatment of self-diagnosed or un-diagnosed symptoms is termed "self-medication" [1]. Hence, medication is used without consultation from a doctor or health professional. Generally, a large segment of population tends to purchase medicines over the counter (without prescription) [2]. This phenomenon is more commonly noted in under-developed and developing countries with the aim of providing self-care. Self-care is defined as an ability of individuals to take care effectively [3]. It is considered as person's aptitude for the establishment of a healthy life style as well as prevention of diseases. In addition to health, nutrition, lifestyle, socioeconomic and environmental factors; self-medication is also considered as one of the methods of self-care [4, 5].

The era of 1980's observed an increase in the phenomenon of self-medication when the World Health Organization (WHO) approved some drugs to be altered from prescription status to the ones sold without prescription. It was done with an aim to reduce the burden on Health care Professionals and shifting the cost from health authorities to the consumers [6, 7]. Mostly minor illnesses alongside prolonged waiting time in hospitals in addition to reduce cost are one of the many factors responsible for an increase in self- medication [8-10]. For example, the most profound symptom with which the patient presents in dentistry is fear, pain and anxiety It is often in the knowledge of dentists that patients in pain often take pain killers on their own to treat themselves. They do it with a perception that it will save them from a visit to a dentist. In addition, antibiotics are routinely used in combination with analgesics. It has resulted in development of problems like toxic drug effects, interaction between medicines, increase cost of treatment and resistance of drugs to function optimally on pathogens [11, 12].

The main beneficiaries of using drugs without prescriptions are the pharmacist. Self-medication has always remained a burning issue amongst health care professionals. Dispensing of drugs without prescription must be stopped by employing all the measures available in term of drug dispensing regulations globally to minimize the harm of self-medication [13]. Increased cost of healthcare facilities and lack of strict regulations can be considered contributory factors. In has been evidenced in recent studies that ethnic variations may affect individual's behavior towards medical treatments and corresponding healthcare management [14-16]. Hence, it can be hypothesized that trends and incidence of self-medication may vary among individuals belonging to various cultures and ethnicities. The main objective of this study is to assess the number of individuals involved in usage of over the counter drugs in Malaysia; as well as to assess if certain races in Malaysian population are more inclined towards the use of medication without prescription. In addition, this study was to ascertain and enlighten different Malaysian ethnicities about the detrimental effect of self-medication.

2. MATERIALS AND METHODS

The current research is a quantitative and preliminary study that was conducted on patients visiting the out-patient department at SEGi Oral Health Centre, Malaysia. In order to collect the patient's data, a simple questionnaire was used [17]. The questionnaire was comprised of two major sections: Section 1: sought information on the socio demographic data of respondents such as age, gender, marital status, level of education, socio-economic status and place of residence. The section 2 was pertinent to information on health seeking behavior and self-medication practice by respondents including the types of medications, duration, frequency and the recommendation source of self-treatment. The purpose of research and its potential outcome was explained in detailed to each respondent and an informed consent was obtained for participating in the research. Questions related to reasons leading to self-medication alongside their side effects if any were also asked from respondents.

A total of 340 patients were randomly selected from the out-patient department at SEGi Oral Health Centre, Malaysia. Twenty five patients refused to sign the consent and participate in the research. A total of 315 patients (166 male and 159 female) participated in the research and completed the designed questionnaire (Figure 1). The data collected was analyzed statistically using SPSS 20.0; appropriate statistical tests (Chi-Square and Fisher exact test) were applied. The *P value* (<0.01) was considered significant. During the course of this study the participants were also informed about the potential adverse effects of medicines as a professional duty to guide the participants towards better quality of life.

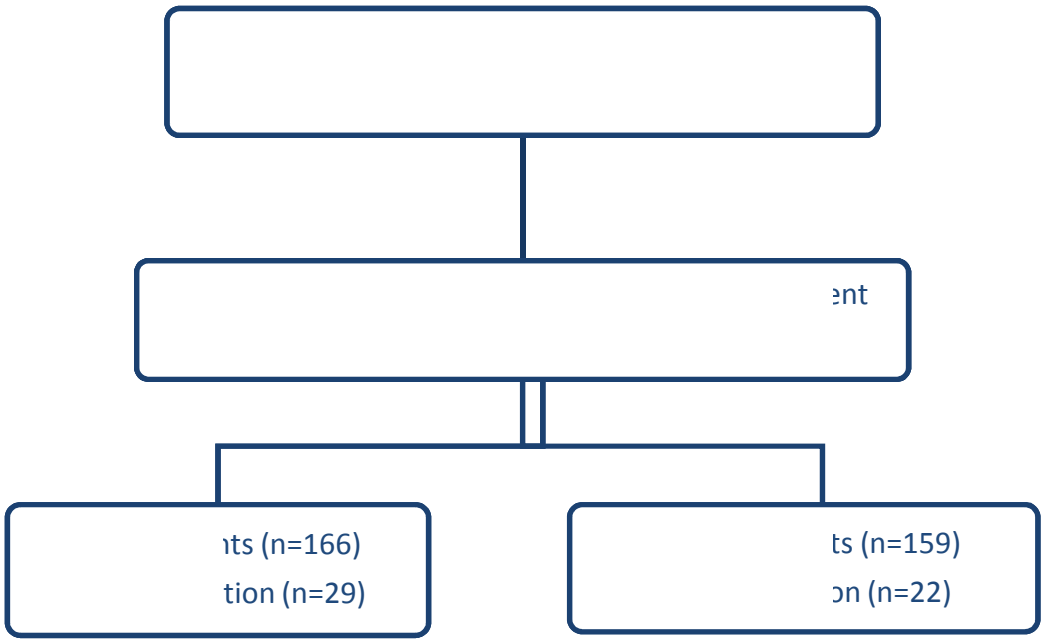

Fig. 1. Number of patients participants in the research and self-medication users

3. RESULTS AND DISCUSSION

The patients of various age groups were included randomly in the study. The majority of patients (n=189) fall in the age group 20-29 Years, followed by patients age group 15-19 years. As the main focus of this study remain to assess the tendency of self-medication among different Malaysian ethnicities. In general, 16.2% of participants reported the use of self-medication. The trend was slightly higher in males (9.2%) than female participants (6.99%). Among the self-medication users, the highest tendency (50%) was reported by patients of Indian origin (Figure 2). The self-medication in patients of Malay origin (11.11%), Chinese (15.79%) and other ethnicities (15.38%) was significantly lower than Indian patients ($P < 0.01$). Considering the education level of the participants, the students reported significantly higher tendency (~20%) of self-medication compared to the working community (~7%).

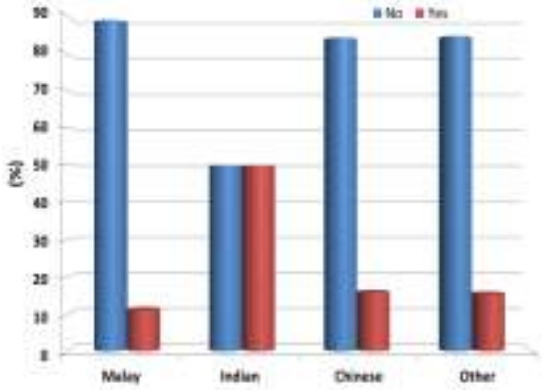

Fig. 2. Tendency of using self-medication among various Malaysian ethnicities

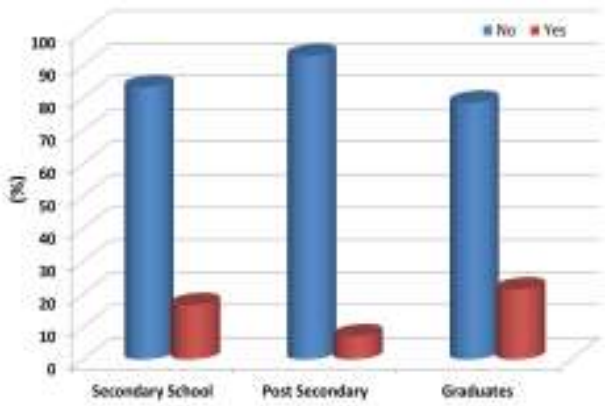

Fig. 3. Tendency of self-medication in relation to education level

The graduate student had the highest tendency (21.43%) of self-medication among the students of various academic levels (Figure 3). It was followed by secondary school students (16.66%) and 7.14% of post-secondary students (*P <0.01*). In terms of type of medications used; a very clear trend was observed in the Malaysian population (Figure 4). There was the highest tendency for using the herbal medications (66.66%), followed by allopathic drugs (22.22%) and homeopathic medicines (11.11%). Considering the types of allopathic medications, oral analgesics remain the most popular drugs (60.56%) for self-medication among patient of all ethnicities followed by other types of oral medications (27.24%). Only 12.11% patients reported use of topical medicines for self-medication.

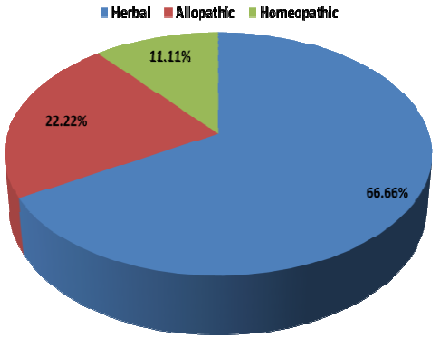

Fig. 4. Types of medicines and their tendency for being used as self-medication agent

Fig. 5. Frequency of using self-medication as reported by various patients

Answering the question, "what is frequency of using the self-medication", 67.13% answered rarely meaning sparingly taking medicines once in four to six months (Figure 5), 23.78% on monthly basis and only 9.09% reported using self-medication on daily basis. A significantly lower tendency towards self-medication was observed among individuals who participated in this study. In terms of gender, males were found to be more inclined towards self-medication than the female counterparts. The most common reason attributed to this behavior by males was lack of timing [18, 19]. General lack of motivation to get themselves examined by health care personals also contributed to the habit of self-medication. In contrast, females were reported to be more inclined to self-medication in certain populations; 47% of Mexican women [20], and 61.9% of females in Nigeria used self-medications [21]. In developing countries, the socio-economic factor is the chief reason for self-medication. Due to high poverty in African regions, females restore to the use of drugs without prescription as it saves them from paying physician/dentist consultation fees. Malaysia's economic situation is better than most of the African countries [22, 23].

Considering the age groups, middle aged individuals were also found to be more inclined to self-medication in comparison to teenagers. It is primarily attributed to the lack of time on part of middle aged people [18, 19]. A significant influence of ethnicity among Malaysian population was found towards self-medication. In terms of ethnicity, individuals belonging to Indian races were mostly found to involve themselves in self-medication. It was followed by individuals belonging to Malay and Chinese races. It can be attributed to the fact that Indian populations have greater believes in alternative and herbal medicaments. Herbal remedies for self-medications are also popular among various Malaysian populations. Malaysian residents belong to various ethnic races mainly Malay, Chinese and Indians. Indians are mostly earlier emigrants from sub-continent region where alternative medicines have always been a common practice. Hence the same tendency is prevalent in Indian races in Malaysia [24, 25]. The use of herbal medicine among Chinese stems from the source that most of the Chinese population has been self-medicating themselves with herbal drugs for over generations on the recommendation of their ancestors. A referral from a friend or family member for using some articular herbal medicine is also very common among races of subcontinent.

The academic qualification of the patient reflects that 21.43% of graduates were using self-medication that is significantly lower than reported tendency of self-medication in other countries for example Egypt (52.5%), India (26%) and in Sir Lanka (83.3%). A general belief among graduate patients was that medicines are an effective tool for alleviating dental pain hence there is no need to visit a dentist [26]. In terms of drug category, the drug most commonly used for self-medication by respondents was oral analgesics. It is used either alone or concomitantly with antibiotics. Similarly, fluoride is popular for its health benefits for teeth [27-29] and it may attract general public to purchase fluoride containing products for self-medication. The combination of drugs is used with a notion that pain will alleviate at a faster pace as compared to using a single drug. Afolabi et al. conducted a similar study in Nigeria and they also found out similar inclination of patients towards usage of oral analgesics (55.1%) alone whereas 27.3% were using antibiotics concomitantly with oral analgesics [30]. The antibacterial agents are commonly used in dentistry [31]. However, the misuse of antibiotics and their unwanted effects are very well known. Antibiotics are used commonly without the consultation of health care professionals [32]. For example, it has been reported in a previous study [32] that 28% patients misuse antibiotic for alleviating the pain while 51% use antibiotics on the advice of their friends. It is also pertinent to note that a signification ratio of Malaysian population was practicing self-medication on a rare basis and not using them regularly. The daily user of self-medication are as low as 9% reflecting that majority of patients are not depending on self-medications for proper continuous treatment and attend physicians on regular basis.

4. CONCLUSION

The trend of self- medication is not very popular in Malaysia, it has been practiced by individuals occasionally. Pain killers are most commonly used drug for self-medication. The main reasons for using self-medications among various ethnicities are lack of time to financial constraints or unprofessional advice from friends or family members. The issue of self-medication has not attracted much attention from the authorities concerned. Regulatory authorities and health care professionals must highlight the drawbacks of self-medication. All possible means of transfer of message must be used be it electronic or print media. In era of today social media can act as a valuable tool to disseminate information about the harmful effects of self-medication. Regulatory authorities must put strict laws and rules in place by to reduce over the counter sale of drugs. More public awareness programs should be organized at all levels in general and schools in particular to highlight about the hazardous effects of practicing self-medication. It is suggested that medical stores must be managed by a qualified pharmacist who can advise the patients about the safety of the drug they are buying and forewarn them too about its hazardous effects.

CONSENT

All authors declare that 'written informed consent was obtained from all participants.

ETHICAL APPROVAL

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

REFERENCES

[1] Ruiz ME. Risks of self-medication practices. Current drug safety 2010; 5(4): 315-323.

[2] Aljinoviæ-Vuciæ V, Trkulja V, Lackoviæ Z. Content of home pharmacies and self-medication practices in households of pharmacy and medical students in Zagreb, Croatia: findings in 2001 with a reference to 1977. Croat.Med.J. 2005; 46(1): 74-80.

[3] Jaarsma T, Halfens R, Huijer Abu-Saad H, Dracup K, Gorgels T, van Ree J, Stappers J. Effects of education and support on self-care and resource utilization in patients with heart failure. Eur.Heart J. 1999; 20(9): 673-682.

[4] World Health Organization, World Health Organization. The role of the pharmacist in self-care and self-medication. Geneva: World Health Organization 1998.

[5] The WSMI Board. Declaration on self-care and self-medication. 2006.

[6] Islam A, Malik F, Basaria S. Strengthening primary health care and family planning services in Pakistan: some critical issues. J Pak Med Assoc 2002; 52(1): 2-6.

[7] Phalke V, Phalke D, Durgawale P. Self-medication practices in rural Maharashtra. Ind j comm med 2006; 31(1): 34.

[8] Abrahams N, Jewkes R, Mvo Z. Indigenous healing practices and self-medication amongst pregnant women in Cape Town, South Africa. Afr J Reprod Health 2002: 79-86.

[9] Major C, Vincze Z, Mesko A, Balogh J, Zelko R, Nemeth E. Medicating outside the consulting room. Orv.Hetil. 2007; 148(7): 291-298.

[10] Schwenkglenks M. Self-treatment and self-medication by Swiss primary care physicians: a cause for concern? Swiss medical weekly 2007; 137(7/8): 105.

[11] Gazal G, Fareed WM, Zafar MS, Al-Samadani KH. Pain and anxiety management for pediatric dental procedures using various combinations of sedative drugs: A review. Saudi Pharm J 2014. E-Pub ahead of print. DOI:10.1016/j.jsps.2014.04.004

[12] Gazal G, Fareed W, Zafar M. Effectiveness of gaseous and intravenous inductions on children's anxiety and distress during extraction of teeth under general anesthesia. - Saudi J Anaesth 2015; 9(1): 33-36.

[13] Francis S, Barnett N, Denham M. Switching of prescription drugs to over-the-counter status. Drugs Aging 2005; 22(5): 361-370.

[14] Seo S, Chung S, Shumway M. How good is “very good”? Translation effect in the racial/ethnic variation in self-rated health status. Quality of Life Research 2014; 23(2): 593-600.

[15] Rees G, Chong XL, Cheung CY, Aung T, Friedman DS, Crowston JG, Lamoureux EL. Beliefs and adherence to glaucoma treatment: a comparison of patients from diverse cultures. J.Glaucoma 2014; 23(5): 293-298.

[16] Garland AF, Lau AS, Yeh M, McCabe KM, Hough RL, Landsverk JA. Racial and ethnic differences in utilization of mental health services among high-risk youths. Am.J.Psychiatry 2005; 162: 1336-1343.

[17] Hsiao FY, Lee JA, Huang WF, Chen SM, Chen HY. Survey of medication knowledge and behaviors among college students in Taiwan. Am J Pharm Educ 2006; 70(2): 30.

[18] Orth-Gomér K, Rosengren A, Wilhelmsen L. Lack of social support and incidence of coronary heart disease in middle-aged Swedish men. Psychosom.Med. 1993; 55(1): 37-43.

[19] King AC, Castro C, Wilcox S, Eyler AA, Sallis JF, Brownson RC. Personal and environmental factors associated with physical inactivity among different racial–ethnic groups of US middle-aged and older-aged women. Health psychology 2000; 19(4): 354.

[20] Angeles-Chimal P, Medina-Flores ML, Molina-Rodriguez JF. Self-medication in a urban population of Cuernavaca, Morelos. Salud Publica Mex. 1992; 34(5): 554-561.

[21] Worku S. Practice of self-medication in Jimma Town. Eth J Health Development 2004; 17(2): 111-116.

[22] Flaaen A, Ghani E, Mishra S. How to avoid middle income traps? evidence from Malaysia. Evidence from Malaysia (April 1, 2013).World Bank Policy Research Working Paper 2013(6427).

[23] Cameron A, Ewen M, Ross-Degnan D, Ball D, Laing R. Medicine prices, availability, and affordability in 36 developing and middle-income countries: a secondary analysis. The lancet 2009; 373(9659): 240-249.

[24] Ali SE, Ibrahim MI, Palaian S. Medication storage and self-medication behaviour amongst female students in Malaysia. Pharmacy Practice 2010; 8: 226-232.

[25] Azhar MIM, Gunasekaran K, Kadirvelu A, Gurtu S, Sadasivan S, Kshatriya BM. Self-medication: Awareness and Attitude among Malaysian Urban Population. International Journal of Collaborative Research on Internal Medicine & Public Health 2013; 5(6): 436-443.

[26] Sallam S, Khallafallah N, Ibrahim N, Okasha A. Pharmacoepidemiological study of self-medication in adults attending pharmacies in Alexandria, Egypt. East Mediterr Health J. 2009; 15(3): 683-691.

[27] Ullah R, Zafar MS. Oral and dental delivery of fluoride: a review. Fluoride 2015; 48(3): 195-204.

[28] Zafar MS, Ahmed N. Therapeutic roles of fluoride released from restorative dental materials. Fluoride 2015; 48(3): 184-194.

[29] Zafar MS. Effects of Surface Pre-Reacted Glass Particles on Fluoride Release of Dental Restorative Materials. World Applied Sciences Journal 2013; 28(4): 457-462.

[30] AO A, Akinmoladun V, Elekwachi G. Self-medication profile of dental patients in Ondo State, Nigeria. Niger J Med 2010; 19(1): 96-103.

[31] Rizvi A, Zafar MS, Farid WM, Gazal G. Assessment of Antimicrobial Efficacy of MTAD, Sodium Hypochlorite, EDTA and Chlorhexidine for Endodontic Applications: An In vitro Study. Mid East J Sci Res 2014; 21(2): 353-357.

[32] Shehadeh M, Suaifan G, Darwish RM, Wazaify M, Zaru L, Alja'fari S. Knowledge, attitudes and behavior regarding antibiotics use and misuse among adults in the community of Jordan. A pilot study. Saudi Pharm J 2012; 20(2): 125-133.

DEFINITIONS, ACRONYMS, ABBREVIATIONS

Herbal Medicine: A plant (or part) used for therapeutic benefits.

APPENDIX