

Self-Reported Medication Use among Adolescents in Kuwait

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Key Words

Self-medication · Adolescents · Gender differences · Age differences · Kuwait

Abstract

Objective: The objectives of this study were to describe and examine the pattern of medication use, including age and gender differences among adolescents in Kuwait, and to establish the sources of information on medicines in this age group. **Subjects and Methods:** A cross-sectional survey of 1,110 male and female students (14–21 years) from 10 randomly selected public schools in Kuwait was conducted. The prevalence of self-medication was estimated. **Results:** The prevalence of self-medication among the high school students was 92%. The prevalence increased by age from 87% among 14-year-olds to 95% among 18-year-olds. Sixty-five percent of medicines used were for pain relief, 54% for respiratory conditions, 39% for allergic conditions, and 37% for dermatological conditions. Twenty-two percent of medicines were nutritional supplements and vitamins, 21% gastrointestinal products, 17% antidandruff products, 15% hair products, 13% for migraine while 8% were for athlete's foot. Pain relief, respiratory, dermatologic and hair products were more prevalent in female adolescents than in male while antidandruff and athlete's foot preparations were used more by male adolescents. The most common sources of information on medicines were parents. **Conclusion:** The prevalence of self-medication among adolescents in Kuwait is high. Self-medication

tended to increase with age and differed between male and female students. Few students consulted pharmacists for information on drugs. There is need to promote the image of the pharmacist in Kuwait as a provider of medication information.

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Introduction

Internationally, self-medication has been reported as being on the rise [1–3]. Self-medication is defined as the use of medication by a patient on his own initiative or on the advice of a pharmacist or a layperson instead of consulting a medical practitioner [4]. In 1999, the American Pharmaceutical Association estimated that, of the 3.5 billion health problems treated in the USA annually, 57% were treated with a non-prescription drug [5]. The World Health Organization has emphasised that self-medication must be correctly taught and controlled [1].

In Kuwait, it is suspected that the prevalence of self-medication is high. One reason for this may be related to the availability of a wide range of non-prescription medication that can be obtained from community pharmacies without a doctor's prescription, with the notable exception of antibiotics, narcotic analgesics, steroids and major tranquillisers. Another reason could be the influence of peers and parents. A number of studies have reported that self-medication starts with the onset of adolescence and increases with age [6, 7].

The present study describes the pattern of self-medication and evaluates the effect of age and gender on these patterns in a randomly selected group of adolescents in Kuwait. In addition, we sought to establish the sources of information on medicines in this age group.

Subjects and Methods

A cross-sectional study was conducted among 1,110 secondary school students in 10 government schools in Kuwait. The students were in grades 9–12, age 14–21 years (mean age 16.23 years); 601 were male and 509 female. Five girls' schools and five boys' schools were randomly selected. Clusters (classes) were selected randomly from these schools. Anonymous self-administered questionnaires were distributed to the students and completed during a regular

class period. Students answered questions relating to the use of non-prescribed medications over the preceding year.

Questions were mainly closed multiple choice type. The questionnaire was divided into three main sections that elicited responses on: (i) socio-demographic characteristics: gender, age, nationality, education level; (ii) aspects of self-medication: the type of the medicines, reasons for use, and (iii) sources of information about medications.

The coded data were analysed using the Statistical Package for Social Sciences (SPSS) V.11. The prevalence of self-medication was determined as percentage of users out of the total sample. Chi-squared tests were used to compare the prevalence of medication use between males and females, between age groups and to test for association between two categorical variables. The p values calculated were two-tailed, and $p \leq 0.05$ was considered significant.

Results

Baseline Characteristics of Participants

Baseline characteristics of the respondents are shown in table 1. All the 1,110 students took part in the study. Ninety-eight percent of the respondents were Kuwaitis.

Prevalence of Self-Medication

The prevalence of self-medication in this adolescent cohort was 92% (table 2). The prevalence increased with age from 87% among 14-year-old students to 95% among 18-year-old. Fourteen-year-old students used significantly less non-prescription medicines than 18-year-old ($p = 0.037$). Sixty-five percent of medicines used were for pain relief, 54% for respiratory conditions, 39% for allergic

Table 1. Baseline characteristics of participants

| Age, years | Male (n = 601) | | Female (n = 509) | |
|-------------|----------------|------|------------------|------|
| | n | % | n | % |
| 14 | 53 | 8.8 | 74 | 14.6 |
| 15 | 118 | 19.6 | 78 | 15.4 |
| 16 | 155 | 25.8 | 132 | 26.0 |
| 17 | 169 | 28.2 | 165 | 32.5 |
| 18 | 85 | 14.2 | 47 | 9.3 |
| Over 19 | 19 | 3.2 | 11 | 2.2 |
| Nationality | | | | |
| Kuwaiti | 594 | 98.8 | 490 | 96.5 |
| Non-Kuwaiti | 7 | 1.2 | 18 | 3.5 |

Table 2. Prevalence of medication use among Kuwait adolescents (n = 1,110)

| Therapeutic category of product | Prevalence (n = 1,110) | | Male (n = 601) | | Female (n = 509) | | p value* |
|--------------------------------------|------------------------|----|----------------|----|------------------|----|----------|
| | n | % | n | % | n | % | |
| All non-prescription medicines | 1,016 | 92 | 539 | 91 | 477 | 94 | 0.047* |
| Pain relief | 718 | 65 | 371 | 63 | 347 | 69 | 0.021* |
| Respiratory | 592 | 54 | 294 | 50 | 298 | 59 | 0.002* |
| Dermatology | 405 | 37 | 196 | 33 | 209 | 41 | 0.003* |
| Anti-allergy | 434 | 39 | 232 | 39 | 202 | 40 | 0.440 |
| Nutritional supplements and vitamins | 244 | 22 | 130 | 22 | 114 | 23 | 0.419 |
| Hair products | 160 | 15 | 51 | 9 | 109 | 22 | <0.001* |
| Gastrointestinal | 230 | 21 | 132 | 22 | 98 | 19 | 0.143 |
| Antidandruff | 191 | 17 | 124 | 21 | 67 | 13 | 0.001* |
| Migraine | 139 | 13 | 78 | 13 | 61 | 12 | 0.334 |
| Athlete's foot | 85 | 8 | 66 | 11 | 19 | 4 | <0.001* |

* p values of gender differences in the use of medicines based on chi-square test. $p < 0.05$ considered significant.

conditions, 37% for dermatological conditions, 23% were nutritional products and vitamins, 21% were gastrointestinal products, 17% were antidandruff products, 15% were hair products, 13% were medicines for migraine and 8% were athlete's foot products.

There were significant differences between male and female in the use of certain medications (table 2). Female students more commonly used pain relief, respiratory, dermatologic and hair products than male, while male students used antidandruff and athlete's foot preparations more than female. Male students also significantly used vitamin A, B, C and E more than female ($p < 0.05$).

Four hundred and ninety-nine (74%) of the female students indicated that they used medications to manage menstrual discomfort: 224 (45%) used paracetamol, 92 (18%) herbs, 76 (15%) mefenamic acid, 69 (14%) hyoscine preparations, 41 (8%) aspirin, 30 (6%) ibuprofen, while 56 (11%) used other products.

Three hundred and two (64%) of the male students reported that they self-medicated for muscular pain: 151 (32%) used various creams for rubbing, 140 (30%) paracetamol, 56 (12%) aspirin, 18 (4%) ibuprofen, 16 (3%) diclofenac, and 22 (5%) used other medications.

Sources of Information on Medication

A breakdown of the sources of drug information for the adolescents in Kuwait is shown in figure 1. The most common source of general information was parents. For acute illness 57% of respondents stated that they would seek advice for medications from a doctor, 36% from their parents, 6% would follow their own instincts while only 1% would seek the advice of a pharmacist. Female students were more likely to seek advice from parents while male students were more likely to seek advice from a doctor ($p = 0.01$). A total of 701 (64%) stated that they would like to receive more information on the medication they used.

Discussion

We acknowledge that this type of study, using a self-administered questionnaire, is largely dependent upon information given by respondents. Although students were encouraged to complete the questionnaire independently, mutual influence between pupils could not be entirely ruled out. However, given the high level of response, the results should closely approximate the behaviour of the adolescent population in Kuwait.

Self-medication increased with age. This trend has been reported elsewhere [6–9] and may be due to children

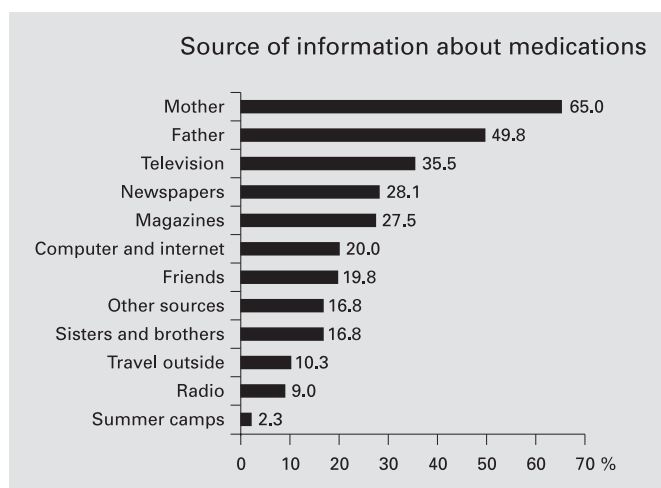


Fig. 1. Source of information on medication among Kuwait adolescents ($n = 1,110$).

becoming more aware of their health needs as they grow older. More female students than male used medicines for pain. This could be explained by the high usage of painkillers for menstrual pain. Male students on the other hand tended to use more of vitamin A, B, C and E than female. Male students also used more products for muscular pain, which may be explained by the fact that they tend to do more physical activities, which often result in sprains and injuries. Gender differences in the use of medicines have also been reported elsewhere [8, 9].

Few students consulted pharmacists for information on drugs. In Kuwait, the pharmacist's role is mainly seen as that of a drug salesman rather than that of a health care provider. Patient education and awareness campaigns are necessary to promote the role of the pharmacist in Kuwait, particularly because in modern society the pharmacist plays an active role in the provision of drug information. In view of the wide spectrum of drugs available over the counter, it is vital that pharmacists in Kuwait assume this role after appropriate training and with continuing professional development programmes.

Conclusion

The prevalence of self-medication among adolescents in Kuwait has been shown to be high. Self-medication use tended to increase with age and differed between male and female students. Few adolescents consult pharmacists on drug information. This issue needs to be addressed by the responsible authorities in Kuwait.

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