Assessment of health complaints and use of medicines among adolescents in Tamil Nadu.

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ABSTRACT

The period of adolescence is a period that is marked by anxiety associated with physical growth significant psychological development and changes in personal relationships. The stresses that adolescents experience may manifest themselves in psychosomatic health complaints. So we investigate self-reported health complaints and the use of medicines among adolescents in Komarapalayam, Tamil Nadu. A self-administered questionnaire was used to survey self-reported health complaints, the use and the sources of medicines that had been accessed, during the preceding 4 months. A stratified random sample design generated a sample size of 640 adolescents (aged 14-16 years). The health complaints and use of medicines that were investigated included hay fever, cold/cough, headache, skin problems, injuries, indigestion diarrhoea/constipation, eye and ear problems. Who formed the analytical sample, of which 57.2% were boys and 42.8% girls. The adolescents reported a total of 8 health complaints and 92.2% reported using at least 1 medicine during the preceding 4 months. The community pharmacy was cited as the most commonly accessed source for most of the medicines that were investigated. A proportion of 32.6% of the adolescents had taken at least 1 medicine without adult guidance during the preceding 4 months. Almost 32% of those who had taken antibiotics had accessed them from the home medicine cabinet. A high proportion of adolescents reported the use of medicines to symptoms of common health complaints. A considerable proportion of adolescents in this study had obtained medicines without adult guidance. This highlights the importance of carefully designed education programs for adolescents about the proper use of medicines.

Keywords: Adolescent. Drug Utilization and health complaints

INTRODUCTION

The period of adolescence is a period that is marked by anxiety associated with physical growth, significant psychological development and changes in personal relationships. The stresses that adolescents experience may manifest themselves in psychosomatic health complaints. So we investigate self-reported health complaints and the use of medicines among adolescents in Komarapalayam, Tamil Nadu. A self-administered questionnaire was used to survey self-reported health complaints, the use and the sources of medicines that had been accessed, during the preceding 4 months. A stratified random sample design generated a sample size of 640 adolescents (aged 14-16 years). The health complaints and use of medicines that were investigated included hay fever, cold/cough, headache, skin problems, injuries, indigestion diarrhoea/constipation, eye and ear problems. Who formed the analytical sample, of which 57.2% were boys and 42.8% girls. The adolescents reported a total of 8 health complaints and 92.2% reported using at least 1 medicine during the preceding 4 months. The community pharmacy was cited as the most commonly accessed source for most of the medicines that were investigated. A proportion of 32.6% of the adolescents had taken at least 1 medicine without adult guidance during the preceding 4 months. Almost 32% of those who had taken antibiotics had accessed them from the home medicine cabinet. A high proportion of adolescents reported the use of medicines to symptoms of common health complaints. A considerable proportion of adolescents in this study had obtained medicines without adult guidance. This highlights the importance of carefully designed education programs for adolescents about the proper use of medicines.

METHODS

A self-administered questionnaire was used to survey health complaints and the use of medicines by 14-16 year-old adolescents attending community pharmacy in Komarapalayam, Namakkal Dist, Tamil Nadu, India during the period from Jan. to April 2010. In order to estimate the number of adolescents required to answer the questionnaire that would ensure statistical validity, the most sensitive question in the questionnaire was determined by a pilot study, assuming 95% confidence and 80% power. This was taken to have an expected sample size of 640 adolescents was calculated using statically. In order to obtain a representative sample. The population size generated by stratified random sampling was 640 adolescents. Data collection was carried out during their visit community pharmacy to under the investigator’s supervision. Informed consent was obtained before distributing the questionnaires to the adolescents. The self-administered questionnaires were answered anonymously by the adolescents and returned. The adolescents took approximately 20 minutes to complete the questionnaire. Sociodemographic information was collected on gender, month and year of birth and area of residence. Social class variation was measured by means of a family affluence scale that had been established by the World Health Organization (WHO).

The data presented in this specific study is restricted to the descriptive analysis of the following items: subjective health complaints, use of medicines and sources of medicines. The adolescents were asked to fill in a questionnaire about the health complaints they had experienced during the preceding 3-month period from a checklist. This list was compiled by the authors after consulting published research that investigated health complaints among adolescents.

The health complaints that were included in this study were those of most relevance to the local scenario and for which over-the-counter medicines were available. The health complaints and use of medicines that were investigated included hay fever, cold/cough, headache, skin problems, injuries, indigestion diarrhoea/constipation, eye and ear problems. The adolescents were asked about the related use of medicines for the health complaints they had experienced and also about their use of vitamins during the same preceding 4 months. Since we wished to investigate the sources from which antibiotics were obtained among the study population, a question was included about the use of these prescription medicines during the preceding 4 months the adolescents who marked the last option were in addition asked whether they had obtained the medicine with or without help from adult relatives.

The answers about sources of medicines were further subdivided into 2 categories: those adolescents who had obtained at least 1 medicine with adult guidance and those who had obtained at least 1 medicine without adult guidance, during the preceding 4 months. In order to check for congruency of meaning, the questionnaire that had been originally drafted in English was translated to Tamil and back translated to English. The data was processed using PC90 (BMDP Statistical Software, 1990). Percentages were calculated for all the nominal categories of the replies given. The sum and mean scores for health complaints and use of medicines were also calculated. When calculating the scores, a value of 1 was awarded for each health complaint and type of medicine. Means in the data provided are presented together with the standard deviation about the mean. The Pearson correlation coefficient was used to report the association between the degree of medication and number of health complaints.

RESULTS

A total of 640 adolescents were including in the data collection and all of them returned the questionnaire. The age of the adolescents ranged from 14 to 16 years.
Table 1. Prevalence of self-reported health complaints and use of medicines during the 4 months preceding the study

<table>
<thead>
<tr>
<th>Health complaint</th>
<th>Prevalence of health complaint, No. (%) of adolescents (n = 640)</th>
<th>Prevalence of use of medicine for the corresponding health complaint, No. (%) of adolescents (n = 640)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hay Fever (n=522)</td>
<td>375 (71.8%)</td>
<td>97 (18.6%)</td>
</tr>
<tr>
<td>Headache (n=340)</td>
<td>101 (20.1%)</td>
<td>9 (1.7%)</td>
</tr>
<tr>
<td>Cold/cough (n=451)</td>
<td>281 (62.6%)</td>
<td>88 (19.5%)</td>
</tr>
<tr>
<td>Ear (n=139)</td>
<td>96 (69.0%)</td>
<td>23 (16.5%)</td>
</tr>
<tr>
<td>Skin (n=161)</td>
<td>123 (76.4%)</td>
<td>32 (19.9%)</td>
</tr>
<tr>
<td>Indigestion/diarrhoea (n=135)</td>
<td>57 (26.2%)</td>
<td>69 (32.2%)</td>
</tr>
<tr>
<td>Injuries (n=214)</td>
<td>96 (45.5%)</td>
<td>90 (41.9%)</td>
</tr>
<tr>
<td>Eye (n=72)</td>
<td>48 (65.7%)</td>
<td>20 (22.2%)</td>
</tr>
</tbody>
</table>
| (mean=15.32 years, SD=0.42). A total of 274 adolescents (42.8%) were girls. From a total of 640 respondents, 192(30%), 386 (60.3%) and 62 (9.7%) adolescents ranked low, medium and high respectively the prevalence of self-reported health complaints during the preceding 4 months for the subjects is given in Table 1. A total of 618 adolescents (96.5%, n=640) had experienced at least 1 health complaint out of a total of 8 health complaints. The most prevalent health complaints experienced by the study population were ear problems, hay fever, cold/cough, headache and skin complaints. The prevalence of the intake of medicines for the corresponding health complaints is also illustrated in Table 1. In addition, 246 adolescents (38.5%, n=640) had taken vitamins, 368 adolescents (57.5%) had taken antibiotics. With regard to the overall use of medicines, a total of 598 adolescents (93.4%) had used between 1 to 6 types of medicines during the preceding 4 months. The most prevalent use of medicines had been that for eye problems, hay fever, cold/cough, headache and skin complaints. There was a statistically significant positive correlation between the number of physical health complaints and number of medicines used.

CONCLUSIONS
The results of this study show a high prevalence of self-reported health complaints and widespread use of medicines among adolescents. In most cases, the participants had obtained medicines with adult guidance. Nevertheless, a substantial 26.3% of those who had used medicines during the preceding 4 months reported that, at some time during this period they had taken medicines without adult guidance. This high prevalence of autonomously administered medication by adolescents had been previously reported by other researchers.

This study has both its strengths and weaknesses. A major strength of the study is that since self reported health complaints are based on perceptions of health, they may be more appropriate in relation to medicine seeking behavior during adolescence than health indicators based on medical records or medical statistics. The study also had its limitations. First, the use of self-administered questionnaires relies on retrospective information to be given honestly and accurately by the respondents.

REFERENCES:
15. Daniel KL, Honen MA, Moore CA. Sharing prescription medication among teenage girls: poten-

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