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## **ANALGESICS AND LAXATIVES ABUSE AND ASSOCIATED HABITS IN BAHRAIN: EXPLORATORY STUDY**

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### **ABSTRACT**

**Introduction:** Drug abuse is the improper use of drugs intended to treat a specific condition, which can be dangerous and even lethal when it involves analgesics and laxatives. Medical problems associated with this abuse include electrolyte and acid/base changes, peptic ulcer, acute renal failure and stroke. The aim of this project is to assess the problem of analgesics and laxatives abuse and to find its incidence among people in Bahrain.

**Methods:** The method used to collect the necessary information for this project was through PubMed and Google search. Additionally, a survey was conducted regarding the use of analgesics and laxatives.

**Results:** It was found that analgesics and laxatives are used widely in Bahrain; however their abuse is not very high. Additionally, more than half of the patients continue taking analgesics or laxatives even after treatment ends. Moreover, only minority of patients is terrified from the idea of running out of medication, but the majority reported that they can live easily without it.

**Conclusion:** The reasons for overuse of analgesics and laxatives in Bahrain may be attributed to the patients' poor awareness of their side effects and ignorance of these dangers may allow them to believe that they can take more than the recommended amount of the medication safely. The findings of the current study suggests restricting the sale of the analgesics and laxatives to the pharmacies, as the pharmacist is the healthcare professional able to provide education about the appropriate use of such medications, and warn of the adverse effects they might provoke.

## INTRODUCTION

Drug abuse is the improper use of drugs intended to treat a specific condition<sup>1</sup>. Abusing drugs typically means prolonged and intense consumption of a drug. People at any age are susceptible to this problem if they are not careful in using their medications. Using drugs becomes abusive and categorized as a disorder when the use begins to cause continuing or growing problems in the user's life<sup>2</sup>. When this abuse involves analgesics and laxatives it can be dangerous and even lethal<sup>3</sup>. Medical problems associated with laxative abuse include electrolyte and acid/base changes that can involve the renal and cardiovascular systems and may become life threatening<sup>4,5</sup>. Moreover, chronic analgesic use increases the risk of peptic ulcer disease, acute renal failure, stroke and myocardial infarction<sup>6</sup>. In Bahrain the situation is similar to many countries; these drugs are readily available as there is no legislation regulating their consumption<sup>7</sup>. The aim of this project is to assess the problem of analgesics and laxatives abuse and to find its incidence among people in Bahrain.

## METHODS

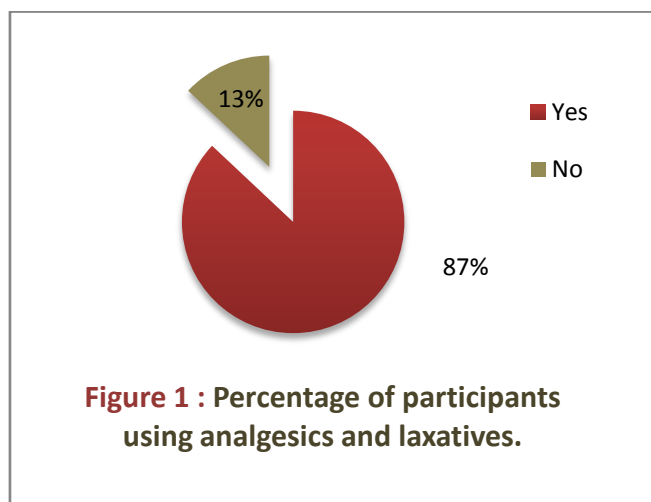
A systematic review of the literature using several medical engines including the National Library of Medicine's PubMed database and Google Search (limited to English language) was performed. The terms used in search were drug abuse, NSAIDs abuse, NSIADs abuse side effects, Chronic NSAIDs use, abuse of OTC analgesics, laxatives abuse, and laxatives dependency side effects. The search profile included comprehensive lists of various clinical studies that were conducted in different world areas for statistically relevant information about analgesics and laxatives abuse. Data of these studies were eventually compared with the analysis of this study, aiming at exploring the analgesics and laxatives abuse.

A cross sectional survey was carried out to explore the analgesics and laxatives abuse among Bahraini population. Using a standardized three paged self-administered questionnaire, 123 varied respondents including family members, friends and some social networks (facebook) were surveyed. Participants answered several questions regarding the analgesics and laxatives abuse. The survey was pilot tested on 10 subjects to improve questions clarity and quality of data collection. The final survey however; included 16 questions about different aspects of analgesics and laxatives abuse. A summary score of percent correct answers was finally created.

Data were analysed using the SPSS statistical software Version 20.0. (SPSS Inc. Chicago, IL, USA). Since the study is cross-sectional, descriptive statistical analysis was conducted.

## RESULTS

It was found that 87% of randomly chosen population takes analgesics and laxatives (Figure1).

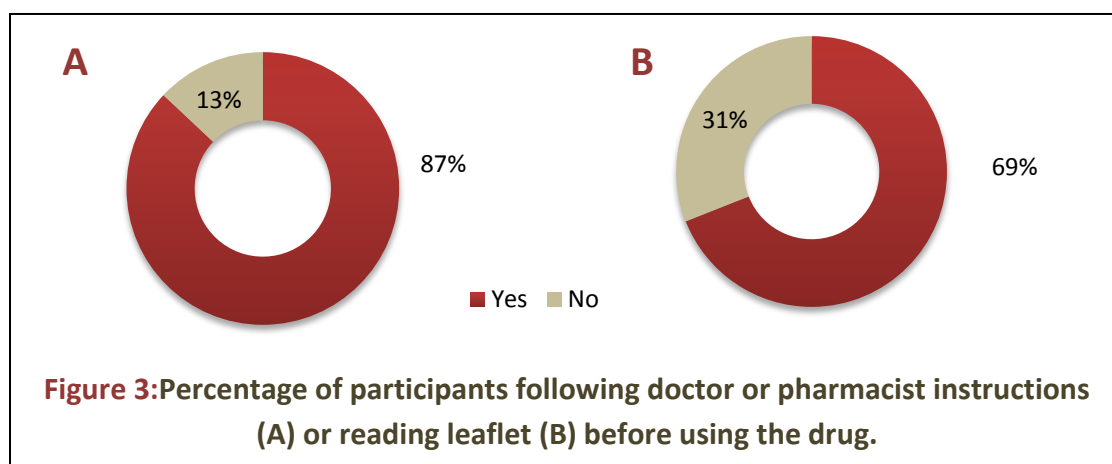
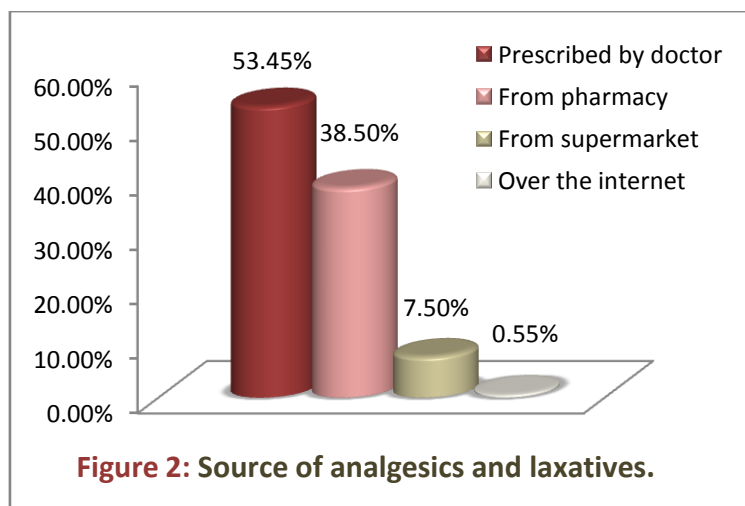


The results showed that the majority of participants use analgesics to relieve pain (41 %) or headache (34.6 %). On the other hand, 53.8 % of participants use laxatives for constipation followed by 34.60% to relieve pain (Table 1). Other improper uses of analgesics and laxatives were also reported.

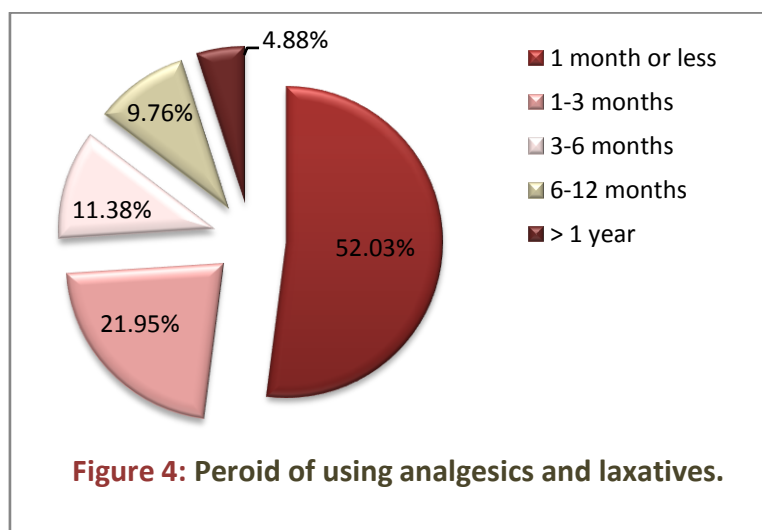
The main source for analgesics and laxatives was found to be doctors' prescriptions (53.45%), although some patients do get them from the supermarkets or online (Figure 2).

Although 87% of participants were found to be following doctor or pharmacist instructions regarding the use of analgesics or laxatives (Figure 3A), only 69 % are reading the medication leaflet before using the drug (Figure 3B).

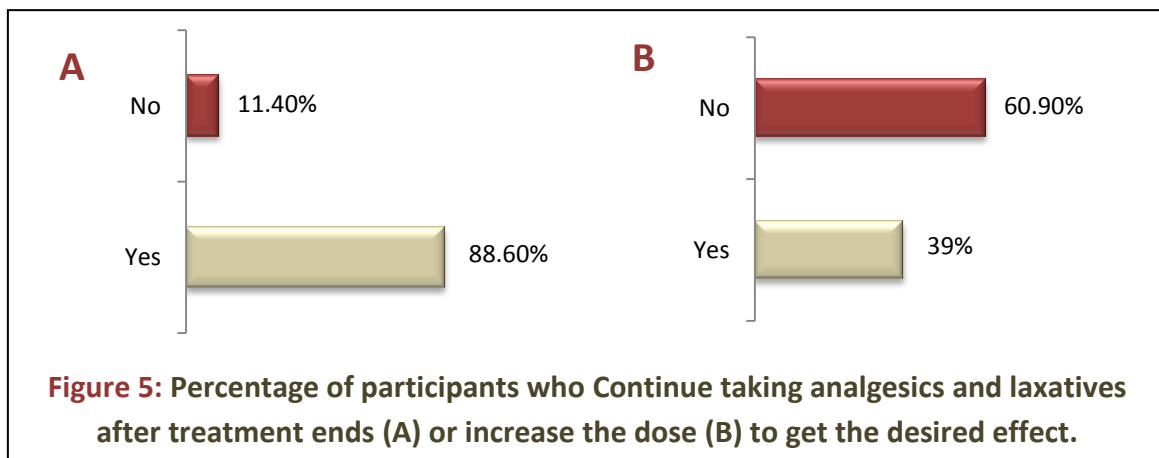
Purpose	Analgesics (A)	Laxatives (B)
Relieve pain	41%	34.60%
Asthma	1.1%	0%
Weight loss	0%	7.7%
Headache	34.61%	0%
Relieve psychological symptoms	3.3%	3.85%
Fever	14.29%	0%
Vomiting	1.1%	0%



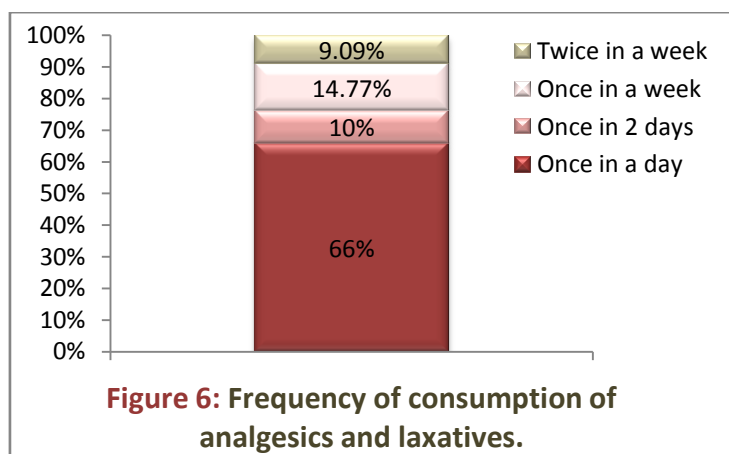
According to the results, 52 % of respondents used analgesics and laxatives for less than 1 month, 21.9% 1-3 months, while very small percentage used them for six months or more (Figure 4).



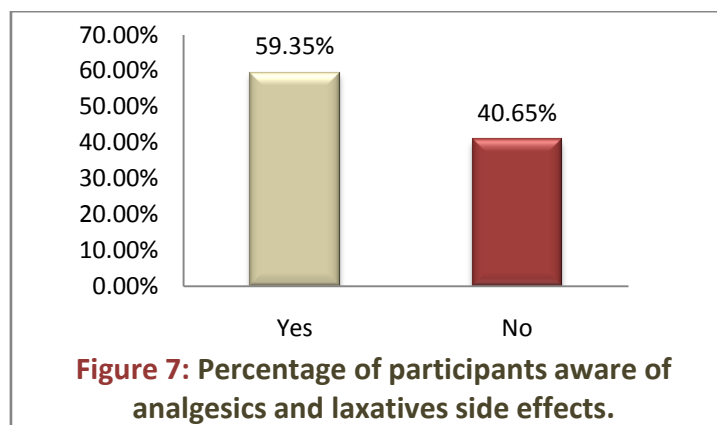
Although 88.6% of respondents are likely to continue taking analgesics and laxatives even after treatment ends (Figure 5A), only 39% of respondents increase the dose to get the desired effect (Figure 5B).



The results revealed that the majority of participants take analgesics and laxatives once in a day (66%), nevertheless some patients use them once in 2 days, once in a week and twice in a week (Figure 6).



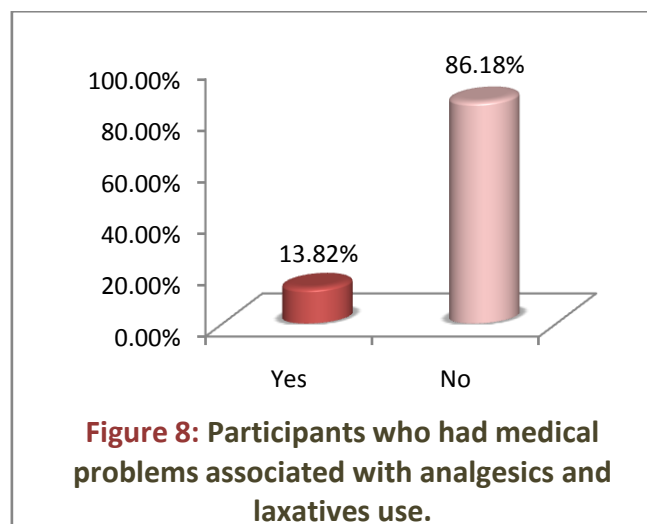
More than half of participants were found to be aware of the dangerous side effects associated with the use of analgesics and laxatives for long period (Figure7).



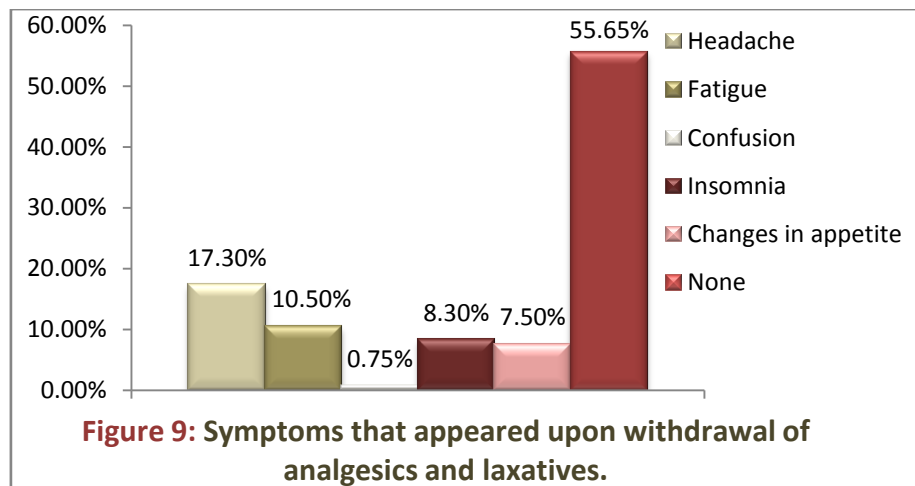
According to the results most of the participants believe that the major side effects of analgesics are kidney problems and dependency(19.6%), followed by abdominal pain and GI bleeding (18.3 %). Similarly,24.2% of participants reported that kidney problem is the main side effect of using laxatives (Table 2). Other side effects of analgesics and laxatives were also reported.

Side Effect	Analgesics (A)	Laxatives (B)
Kidney problems	19.60%	24.24%
Hypertension	7.18%	3.03%
Bone fracture	0.65%	3.03%
GI bleeding / ulcers	18.30%	18.18%
Dehydration	6%	15.15%
Dependency	19.60%	15.15%
Abdominal pain	18.30%	3.03%
Diarrhea	8.40%	15.15%

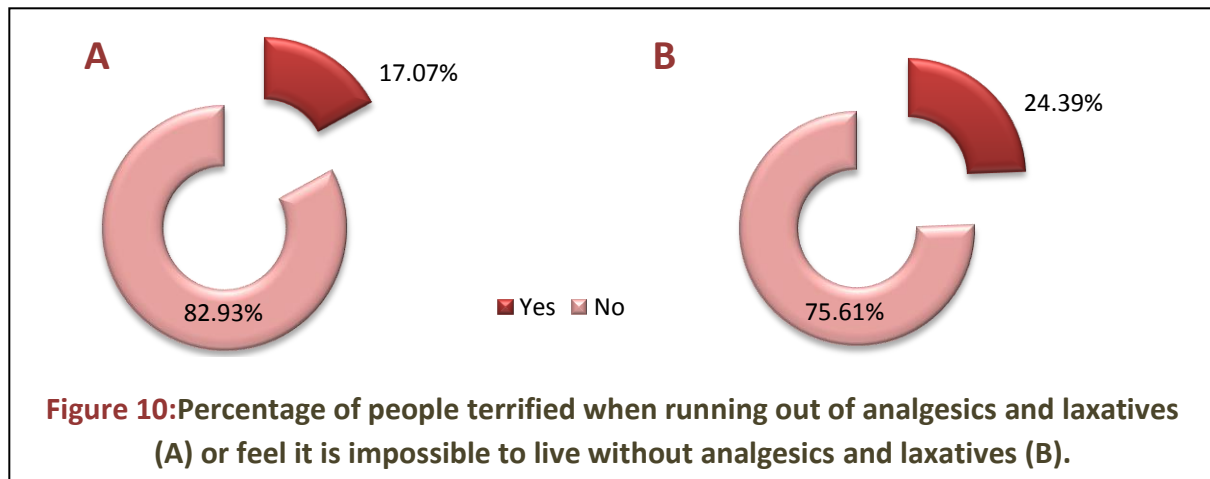
86.1% of respondents admit that their use of analgesics and laxatives was not associated with any medical problems (Figure 8).



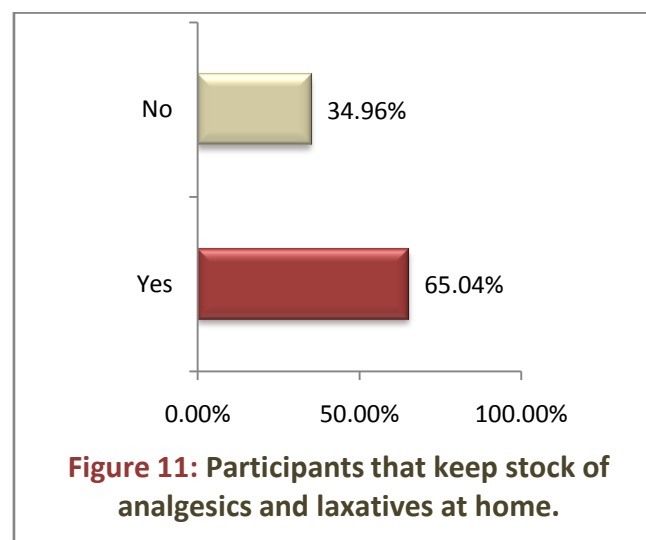
Although most participants did not experience abnormal symptoms when stopped taking analgesics and laxatives, some of them had headache, fatigue, insomnia and changes in appetite (Figure 9).



According to the results, only 17% of patients are terrified from the idea of running out of medication, but the majority reported that they can live easily without it (Figure 10).



More than half of respondents reported that they keep stock of analgesics and laxatives at their homes usually for emergencies (Figure 11).



## DISCUSSION

It is clear from the results that analgesics and laxatives are used widely in Bahrain and this can be due to the safety and availability of these medications over the counter which allows the patients to treat their symptoms without visiting a health care provider. However, the proportion of analgesics and laxatives abuse among people in Bahrain is not very high; this may be because most patients are always following the doctor or pharmacist instructions regarding the use of these medications. Another reason could be that people in Bahrain are more likely to read the medication leaflet before taking the medication which enables them to use the drug correctly, safely, effectively and would prevent the danger of medication abuse. Furthermore, excessive dosing is not the only way in which patients abuse analgesics or laxatives, it also occurs when patients exceed the maximum recommended duration of drug use as more than half of patients admit that they continue taking analgesics or laxatives even after treatment ends. The reasons for overuse are not entirely clear, but may be attributed to the users' underestimation of the risks of these medications. Patients' poor awareness of analgesics and laxatives side effects and ignorance of these dangers may allow them to believe that they can take more than the recommended amount of the medication safely. Moreover, the percentage of people who had medical problems associated with analgesics and laxatives cessation is very low, this could be because majority of patients do not exceed one month in medication use.

Analgesics and laxatives abuse was found to be small relative to total use as only minority of patients are terrified from the idea of running out of medication, but the majority reported that they can live easily without it. The findings of the current study are comparable to that reported by Agaba E.I. et al<sup>8</sup>. This study has shown that the use and abuse of analgesics in Nigeria population is similar to that in Bahrain with small insignificant difference in regard to the abuse.

The findings of the current study suggests restricting the sale of the analgesics and laxatives to the pharmacies, as the pharmacist is the healthcare professional able to provide education about the appropriate use of such medications, and warn of the adverse effects they might provoke.

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