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SUBSTANCE USE AND OCCUPATIONAL WELL-BEING AMONG ANESTHESIA PROFESSIONALS IN IRAQ: A CROSS-SECTIONAL SURVEY

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ABSTRACT

Healthcare professionals' use of substances is a key occupational and patient safety issue. Stress in the working environment and high concentrations of potent medicines for clinical use, can also be a source of exposure for anesthesia professionals, making the prevention, confidential support and safe use of medicines even more important. The purpose of this study is to report the prevalence of substance use, perceived stress, coping mechanisms and burnout among the anesthesia professionals (APs) who completed an electronic questionnaire in Iraq. Cross sectional questionnaire sent out electronically from 1st January 2025 to 1st May 2025. 100 responses were gathered, with 75 responses that were eligible and not incomplete. The obtained results are presented descriptively (in terms of numbers and percentages). There were 75 respondents of whom 60 (80.0%) reported no substance use and 10 (13.3%) reported alcohol use and 5 (6.7%) reported opioid substance use. The age group of 22-24 years was the largest (40.0%) and 80.0% of the respondents were male. There were the most students (26.7%) with a stress rating of 3/5. The most common coping strategy noted was prayer (53.3%). Forty percent (40%) reported having experienced burnout, 33.3% reported no burnout, and 26.7% were uncertain. In general, most respondents said they didn't use any drugs or alcohol, and a few said they used alcohol or opioids. Stress and burn-out were also mentioned by the participants. Note that the results of the questionnaire are descriptive and should not be viewed as a prevalence estimate for the national population and that the sample was purposively selected online.

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Introduction

Healthcare professional substance use is a key occupation health issue that can have a detrimental impact on healthcare professionals' health, their performance, and the safety of patients. Use of drugs or alcohol can negatively affect one's body, mind, relationships, and work duties. Especially in the clinical context, these issues are relevant, as one encounters powerful drugs or a situation that demands constant attention and good clinical judgment [1,2].

Anesthesiologists are operating in a challenging clinical setting that involves a lot of responsibility, a time constraint for making decisions, and constant monitoring of patients. They are responsible for the management of anesthetic agents, airway control, monitoring of vital signs and quick action to the treatment of potentially life-threatening complications. These responsibilities involve focus, knowledge of the technical aspects, and emotional stability, which all are parts of occupational health and safety in the practice of anesthesia [3,4]. Also, shift working, long working hours, workload pressures and exposure to critical clinical situations can add to the occupational stress and psychological fatigue.

While stress at work can be a cause for someone to use substances, it doesn't always happen. But, for someone who is vulnerable, it can be one of a number of factors that can contribute to maladaptive coping. Other factors such as individual factors, psychological stress, organizational climate and stigma can also affect the likelihood that health professionals will seek help for substance misuse issues [4–6]. Previous studies have examined the drug and alcohol use by physicians and anesthesia providers and discussed the importance of identifying, evaluating and providing confidential drug and alcohol treatment services [1,6,7]. It is important to note, however, that the number, severity or impact of substance use can only be determined on the basis of a clinical diagnosis of substance use disorder, which is not detected by a questionnaire.

Good occupational health also involves controlling stress, having access to social supports, and psychological resilience. Religious and spiritual, social, physical activity and relaxation are all coping strategies. These strategies can be used to cope with stress in daily life, but should not be used in place of professional evaluation or treatment if there is an indication of significant psychological stressors and/or substance use disorder [5,8]. Another pertinent issue in healthcare settings is burnout, as chronic stress in the workplace can impact employee health and, in turn, their ability to perform effectively in their roles.

Patient safety and support for staff must be taken into account together. Proper storage, inventory control, documentation and system for detecting potential impairment of medication. On the other hand, a confidential referral process, mental health support, peer support, and a non-stigmatizing workplace policy can be implemented to help professionals get help before problems escalate [6–9]. These actions are especially significant in the practice of anesthesia: handling of medications safely and ensuring that the clinical competency is maintained.

Substance-use is important, but the categories of substance use or selected occupational well-being indicators among the anesthesia professionals who responded to a questionnaire on substance use via E-mail in Iraq are described only. It could be a tool to look for further research and to inform everyday discussions with staff about support and medication safety. However, the online sampling process and the small sample size reduces the generalizability to the country.

This study aimed to describe the demographic characteristics, self-reported substance use, perceived stress, coping mechanisms and burnout among anesthesia professionals who answered an electronic questionnaire in Iraq. It also was intended to discuss real-world prevention and support measures that are relevant to anesthesia workplaces.

Materials and Methods

Study design

The source thesis explains a quantitative cross sectional study that was done by distributing an electronic questionnaire throughout the Iraqi governorates.

Participants and sampling

There were 100 forms filled out on the questionnaire beginning January 1st through May 1st of this year, from

which 75 were accepted after discarding forms that were incomplete or incompatible and forms with unacceptable ages. Eligible age reported was from 22 to 60 years. Using purposive sampling technique, the participants were recruited by online distribution. It is intended for use by anesthesia physicians, assistants, technicians and others related to anesthesia.

Questionnaire and variables

Demographic items, years of anesthesia experience, perceived stress, reported category of substance use, coping mechanisms, and burnout experience were included in the questionnaire. Both closed ended and open ended questions are referred.

Statistical analysis

Descriptive analysis using frequencies and percentages was done with categorical data. Data was presented in tables and in bar charts where appropriate, to show the demographic characteristics, perceived stress levels, substance-use categories, coping mechanisms and self-reported burnout of respondents. No inferential statistical tests were done. The results were only interpreted descriptively and no causal claims or generalization to all anesthesia professionals in Iraq provided.

Results

The age profile of respondents is summarized in Table 1. The largest reported group was aged 22–24 years, followed by those aged 25–29 years.

Table 1. Age distribution of respondents

Age group (years)	Count (n)	Percentage (%)
22–24	30	40.0
25–29	25	33.3
30–34	10	13.3
35 and above	10	13.3
Total	75	100.0

Table 2 presents the gender distribution. Male respondents constituted four-fifths of the sample.

Table 2. Gender distribution of respondents

Gender	Count (n)	Percentage (%)
Male	60	80.0
Female	15	20.0
Total	75	100.0

Professional experience is shown in Table 3. The most common category was 1–3 years of experience, while the smallest group reported seven or more years.

Table 3. Years of professional experience

Experience	Count (n)	Percentage (%)
Less than 1 year	20	26.7
1–3 years	30	40.0
4–6 years	15	20.0
7 years or more	10	13.3
Total	75	100.0

Table 4 summarizes stress ratings on a five-point scale. A rating of 3 was the most frequent response (26.7%); 20.0% selected the highest stress rating.

Table 4. Self-rated stress levels

Stress rating	Count (n)	Percentage (%)
1 (not stressful)	10	13.3
2	15	20.0
3	20	26.7
4	15	20.0
5 (extremely stressful)	15	20.0
Total	75	100.0

The categories of substances reported in Respondents' answers are shown in Table 5. and Figure 1; the majority of respondents answered "None", followed by 13.3% who reported drinking alcohol, and 6.7% who reported opioid use. These categories are not intended to represent a clinical diagnosis of addiction, as the source indicates that they refer to "self-reported use.

Table 5. Reported substance-use categories

Reported category	Count (n)	Percentage (%)
None	60	80.0
Alcohol	10	13.3
Opioids	5	6.7
Total	75	100.0

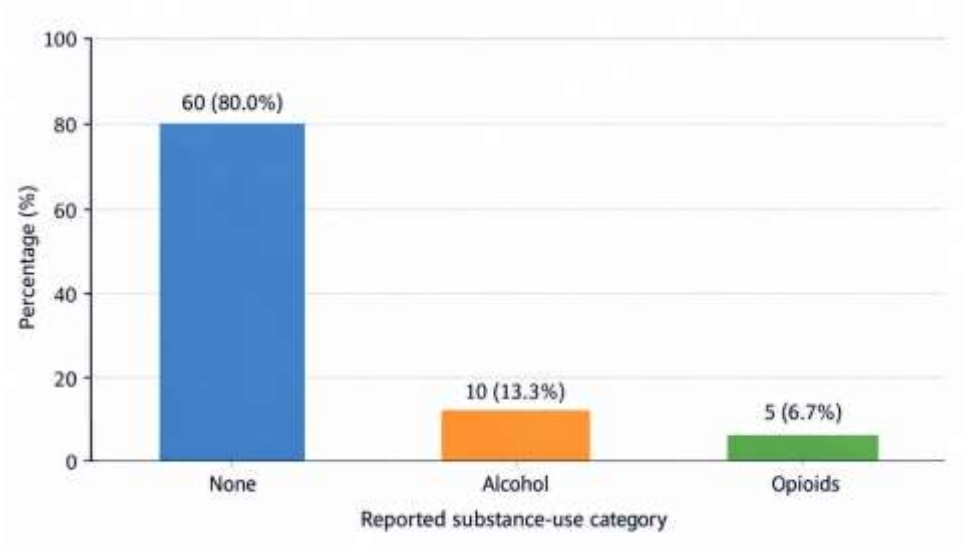


Figure 1. Reported Substance-Use Categories Among Anesthesia Professionals in Iraq

Table 6 shows the coping mechanisms reported by participants. Prayer was the most common response, followed by family get-togethers or friends. The categories and counts are taken from the source material.

Table 6. Reported coping mechanisms

Coping mechanism	Count (n)	Percentage (%)
Prayer	40	53.3
Family gatherings or meeting friends	20	26.7
Exercise	10	13.3
Meditation	5	6.7
Total responses as reported	75	100.0

Table 7 summarizes the actions taken in response to a burn out. 40% indicated that they experienced burnout at work, while one-third did not, and the rest were not sure.

Table 7. Self-reported burnout experience

Burnout response	Count (n)	Percentage (%)
Yes	30	40.0
No	25	33.3
Maybe / unsure	20	26.7
Total	75	100.0

Discussion

In this study, the authors have classified the substances used and the indicators of well-being of the occupation for 75 individual participants completed a questionnaire electronically in Iraq. The majority of respondents (80.0%) said they did not use any substances, 13.3% said alcohol was used and 6.7% said opioid was used. Self-reported does not equal a substance use disorder and so results must be taken with a grain of salt. Anesthesia workers and physicians have been found to be susceptible to substance-related disorders and prevention, early detection and treatment are an absolute must [10,11]. However, because of the differences in methodology between previous research and the present survey (purposive, online recruitment, no frequency, severity or diagnostic criteria), it is not possible to make direct comparisons.

One of the other key items of learning was in the area of occupational stress. The highest rating (3 out of 5) was the most frequently reported stress rating with 20.0% selecting this, and 26.7% selected the lowest. The results show that there are differences in the level of perceived stress among the respondents. Further, anesthesia practice calls for a lot of clinical responsibility, and it is essential to respond quickly to potential and serious complications thereby increasing the occupational burden [12,13]. However, it is important to note that there is no association between stress and substance use at the individual level nor was there inferential statistical analysis. Previous literature also supported the appropriate workplace support as occupational and personal factors previously mentioned that could have been linked to substance related problems among health care practitioners [14,15].

The most frequent coping strategy reported was prayer (53.3%) and next was family gatherings or meeting friends (26.7%). 1/13.3% reported using exercise, 1/6.7% reported using meditation. The results indicate that in this sample coping through religious practices and social connection was a common coping strategy. Some of these strategies may be part of an individual's stress management plan, but no assessment of the effectiveness of these strategies in stress management and/or substance use prevention was carried out in the context of this survey. Occupational stress/substance-related problems may require clinical intervention and professional psychological support and evidence-based treatment remain important [16,17].

When it comes to burnout, 40% of respondents indicated they had experienced burnout, 33.3% reported that they had not burned out and 26.7% were uncertain. It is recognized that there is a need for additional evaluation of the well-being of anesthesia providers in this distribution. The results are not meant to be interpreted as a formal estimate of the prevalence of burnout, however, as it was measured with a self-reported response and not by a specified validated instrument. Support areas that can be helpful to consider for institutions may include procedures for workload, rest, psychological support and communication with others in the work area.

The results have implications for medication safety as well. Since the practitioners of anesthesia could be administering high potency drugs, it is important for healthcare facilities to have safe storage, documentation, inventory checks and clear guidelines when there is a suspicion of impairment. These should be complimented by confidential assessment and referral pathways, access to treatment and non-stigmatizing policies to encourage help seeking by health care providers without compromising the patient [18].

The study has a number of limitations. Because of the small sample size there is some limited representativeness and generalizability of the findings stemming from purposive online recruitment and self-reported responses.

Furthermore, there are no clearly identified validated instruments and inferential analysis that can be used to assess occupational stress, burnout and possible relationship between the study variables. The data should thus be considered as descriptive data and not as estimates of the prevalence in the Nation or as evidence of cause-effect relationship. Larger and more representative samples, as well as validation of the assessment instruments, and studies exploring the correlation between occupational factors, coping, burnout and substance use are recommended for future research.

Conclusion

None of the 75 included in the source analysis indicated current or prior substance use and slightly fewer reported the use of alcohol or opioids. The stress ratings ranged, the most common coping strategy was prayer and 40.0% reported burnout. The results are important for demonstrating the effect of the staff health promotion programme, but are also important as they offer information on safe handling of medication, which cannot give a national prevalence or cause and effect information. The use of larger and representative sample numbers and well described and validated instruments would be desirable.

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