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# Prevalence and Socio-demographic Factors of Aggression among Medical College Students

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## ABSTRACT

Aggressive behavior in college students can be considered as an analyst for crime, drug abuse, depression and academic failure. The aim of this study was to determine the prevalence of and the factors related with aggression among a sample of Kermanshah medical college students. In this cross-sectional, showed in Kermanshah University of Medical Sciences, in the western Iran, a total of 601 students were randomly selected to voluntarily participate in the study. Participants filled out a Buss-Perry aggression questionnaire. Data were analyzed by SPSS version 21 using logistic regression statistical tests at 95% significant level. Almost, 15.3% of the participants were aggressive. The mean score of aggression was 61.1 [95% CI: 59.6, 62.7], ranged from 29 to 140. Logistic regression showed that marital status and smoking were the most influential predictive factors on aggressive behaviour. Our findings showed a high level of aggressive behaviour among college students; it seems that a designing intervention to reduce aggressive behaviour and improve mental health program among college students is necessary.

**Key words:** College Students, Aggression, Kermanshah

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## 1. INTRODUCTION

Aggression has always been complicated to define; this behavior is affected by conditional and psychological factors on one hand, and genetics and biological factors on the other hand. Thus, it is problematic to offer a correct description of the behavior. In this respect, Baron and Richardson suggested that such behavior aims to hurt another party and leads to defensive and avoidance reactions from the victim of the behavior (1). Aggression may be seen in various forms; for example, verbal and physical form (introducing behavioral components), wrath (excitement aspect) and hostility (cognitive aspect). Additionally, existing evidences suggest the increase of aggression during last decades and its negative effects on human interactions and relationships (2). Several studies indicated that aggression is higher among men than women, blacks than whites, in cold regions than in the tropics regions and among migrants (1, 3). In addition, environmental and family factors are associated with aggressive behavior (4, 5). Other factors

impacting aggression could be deprivation, rejection, poverty, being punished and being sexually and emotionally abused (2). Aggression is one of the most important concerns of psychiatrists and highly impacts individual's behavior and personality (5). Considering several negative consequences of aggression (including negative image among peers and tutors, rejection by peers, education failure, drug abuse, murder, suicide and crime), many researchers found it necessary to investigate the issue (2). Aggression and its consequences among university students remind us of the importance of planning and offering preventive intervention programs. In this regards, several study suggested that the epidemiological studies are the first step to design preventive programs (6-10). The objective of this study was to determine the prevalence of and the factors associated with aggression among a sample of Kermanshah medical college students in the western Iran.

## 2. MATERIALS AND METHODS

### 2.1. Participants

This cross-sectional study was conducted on 601 medical university students in Kermanshah University of Medical Sciences in the western Iran during 2015. The study has been approved by Student Research Committee at the Kermanshah University of medical sciences. To enroll the participants and collect data, the following stages were followed: first, different faculties of the Kermanshah University of medical sciences were considered as clusters. Then based on faculty size, students in each faculty were randomly selected into this study, if they agreed. Finally, the volunteers were given the self-assessment questionnaire.

### 2.2. Measurement

Questionnaire included two sections that were comprised of 44 questions:

Part one (demographic data): this included 15 questions about age (years), sex (female, male), field of study (medical, dental, pharmacology, rehabilitation, paramedics, health, nursing and midwifery), marital status (single, married), living in dormitory (yes, no), economic status of family (very weak, weak, average, good very good), parents' educational level (primary school, secondary school, high school diploma, and academic education),

parents' divorce (yes, no), cigarette smoking (yes, no), drug abuse (yes, no), alcohol consumption (yes, no), average age of cigarette smoking, drug abuse and alcohol drinks for the first time (year). Part two (Buss-Perry aggression questionnaire): aggression was determined by Buss-Perry aggression questionnaire (11). This scale has 29 items in which participants rank certain statements along a 5-point continuum from "extremely uncharacteristic of me" to "extremely characteristic of me". Example of the items is: "once in a while I can't control the urge to hit another person". In overall, this scale divided the participants in two classes (aggressive; who had scores greater than 78) and non-aggressive (who had scores less than 78). Cronbach's Alpha coefficient for this questionnaire was 0.83.

### 2.3. Data Analysis

Data were analysed by SPSS version 21 using appropriate statistical test, including logistic regression at 95% significant level.

## 3. RESULTS AND DISCUSSION

The mean age of participants was 22.19 years [SD: 3.3], ranged from 18 to 42 years. More details of demographic characteristics of the participants are shown in Table 1.

Table 1. Demographic Characteristics of the participants

Variables	Number	Percent
<b>Gender</b>		
Male	253	42.1
Female	348	57.9
<b>Marital Status</b>		
Married	85	14.1
Single	516	85.9
<b>Father's educational level</b>		
Illiterate	55	9.2
Under Diploma	133	22.1
Diploma	179	29.8
Academic Education	227	37.8
Unanswered	7	1.2
<b>Mother's Educational Level</b>		
Illiterate	86	14.3
Under Diploma	213	35.4
Diploma	151	25.1
Academic Education	142	23.6
Unanswered	9	1.5
<b>Parents' Divorce</b>		
Yes	27	4.5
No	556	92.3
Unanswered	19	3.2
<b>Economic Status</b>		
Very Good	66	11
Good	240	39.9

Average	257	42.8
Weak	26	4.3
Very Weak	6	1
Unanswered	6	1

About 11.6%, 1.2% and 7.7 % of the respondents had a history of cigarette smoking, opium use, and alcohol drinking respectively. Furthermore, our findings indicated that the mean initiation age for cigarette smoking, opium use, and alcohol drinking were 17.62 (ranged from 6 to 25 years), 18.66 (ranged from 15 to 21 years) and 18.61 years (ranged from 11 to 28 years), respectively. Almost based on Buss-Perry aggression questionnaire, 15.3% of

participants were aggressive. Logistic regression (backward stepwise method) building procedure was directed and in conclusion on 11<sup>th</sup> phase the procedure was stopped and the top model was selected. It was shown that between the socio-demographic features, marital status, and smoking were the most significant prognostic factors for aggression among participants (Table 2).

**Table 2. Multiple logistic regression analysis for socio-demographic characteristics related to aggression among participants**

Variables	Crude OR (95% CI)	P value	Adjusted OR (95% CI)	P value
Final Model; Step 11				
<b>Marital Status</b>				
Single	1.00	---	1.00	---
Married	2.144 (1.217 – 3.779)	0.008	2.503 (1.337 – 4.687)	0.004
<b>Smoking</b>				
No	1.00	---	1.00	---
Yes	2.667 (1.476 – 4.817)	0.001	2.665 (1.419 – 5.005)	0.002

Our findings indicated that 15.3% of the participants were aggressive. In this regard several studies indicated the incidence of 20 to 50 percent of aggression among young adults (2, 12, 13). Aggression in educational environment can lead to several negative effects such as reduction of academic achievement. These findings can be regarded as an alarm for the educational authorities and the factors predicting aggressive behavior among college students should be studied in order to take steps for removing them. Our findings showed that the married and smoking individuals were at greater risk of aggressive behavior. In this regard, some studies reported that married people were more aggressive than singles due to verbal and non-verbal arguments with spouse, supplying family economy and dealing with children (14). According to the results it seems that in the design of preventive interventions for aggression special attention should be paid to the married students. Our study also showed that aggressive behavior is often accompanied by the use of smoking, which is in line with the findings of earlier studies (2, 14). In this regard, several studies reported that aggression could be a predicator to delinquency, drug abuse, depression and school failure (2). Epstien *et al.* also showed that aggression was associated with drug abuse, including smoking, alcohol, marijuana, etc. (14). To overcome their excitement and gain internal relaxation, some people abusing drugs, which is an excitement-based reaction to facing problems, but it has several negative consequences. Therefore, it seems necessary to introduce stress management programs and help students encounter their problems to improve their health.

#### 4. CONCLUSION

College students have been considered as the future power of their society and psychological problems such as aggression could affect their health and create several problems for them. Therefore, it seems necessary to offer educational programs to control anger and prevent aggression among college students. It also may be helpful to recognize the factors resulting in aggression to plan relative interventions.

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#### AUTHORS CONTRIBUTION

This work was carried out in collaboration among all authors.

#### CONFLICT OF INTEREST

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

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