

## A social work study high-risk behavior among teenagers

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### ABSTRACT

Teenagers are believed the people who are supposed to build the world's future. High-risk behaviors such as addiction to drugs, smoking cigarettes, sex, etc. could significantly hurt teenagers and there must be some supporting programs to reduce these issues as much as possible. This paper performs an empirical investigation to study different factors influencing high-risk behavior among teenagers who live in a city of Esfahan, Iran. The proposed study designs a questionnaire and distributes between two groups of female and male teenagers. The results indicate that while there is a meaningful relationship between high-risk behaviors and average teenagers grades among male teenagers there is no meaningful relationship between high-risk behaviors and teenagers' grades among female students. The results also indicate that there is a meaningful difference between gender and high-risk behavior. The season of birth for female and male students is another important factor for having high-risk behaviors. While the order of birth plays an important role among male students, the order of birth is not an important factor among female teenagers. Finally, the results indicate that teenagers' parental financial affordability plays a vital role on both female and male teenagers.

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## 1. Introduction

Teenagers are our next generation people and the people who are supposed to take care of our world. These people need to learn the necessary skills, get educated and contribute to the world. Teenagers are world's human resources and many high-risk factors such as drug addiction, violence, etc. could hurt these people, significantly. During the past few years, there have been different studies on high-risk behaviors. O'Cathail et al. (2011) performed a study to examine cigarette smoking and risk taking behavior in Irish teenagers. They reported that out of 48.4% who had smoked tobacco in their lifetime, 15.1% had used cannabis and claimed that cigarette smokers were more likely to use cannabis than non smokers. The other finding was that cigarette smoking was independently associated with high-risk health behavior and they are more likely to have dysfunctional social relationships.

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Hedman et al. (2007) investigated influencing factors for smoking cigarette among teenagers and reported that participating in sport activities may delay smoking but it does not necessarily prevent it. Miller (1997) performed an empirical study on family structure, personality, drinking, smoking and illicit drug use on UK teenagers.

Moolchan and Mermelstein (2002) performed a study on ethical challenges of using tobacco among teenagers. They reviewed some of the ethical issues presented in etiologic and clinical treatment research addressing adolescent smoking and reported that context-specific ethical adjustments and alternative perspectives would likely to be required if we intended to overcome procedural difficulties in conducting teen smoking studies. Cornelius et al. (2002) performed a comprehensive study on different drug addictions such as alcohol, tobacco and marijuana among teenagers and reported a 6-year follow up of offspring growth effects.

The other issue among teenagers is having sex among them, which could lead to unpredictable consequences such as HIV disease, hepatitis B virus or unwanted pregnancy (Locke et al., 2008). The issue becomes an unfortunate since many of these incidents will remain with the rest of these people's lives. Meheus (2000) studied teenagers' lifestyle and the risk of exposure to hepatitis B virus. Sonenstein (2004) studied the changes on teenagers attitude on sexual relationships. Sonenstein reported that about half of the change is the result of delaying sexual initiation and half is the result of better contraception. Haldre et al. (2007) studied the effects of teenage marriage on poor pregnancy for a ten year period between 1992 to 2002 and reported that an increased risks in neonatal and postneonatal death among younger teenagers of an age of 17 years and less seem to be a result of prematurity. The premature pregnancy would have social consequences as well (Contreras et al., 1995).

The proposed study of this paper study the different factors influencing high- risk behavior among teenagers who live in a city of Esfahan, Iran. The proposed study designs a questionnaire and distribute between two groups of female and male teenagers. This paper is organized as follows. We first present details of our survey and sampling in section 2 and the section 3 presents details of our findings. Finally, concluding remarks are given in the last to summarize the contribution of this paper.

## 2. The proposed study

The city of Isfahan has over 20,000 teenagers who study in high schools and we selected 200 teenagers, 100 male and 100 female, and distributed questionnaire among them. We have adopted a standard questionnaire on high-risk behavior developed by the center of disease prevention in United States of America, which contains personal characteristics of participants with 69 questions in Likert (Likert, 1932) scale. The Cronbach Alpha (Cronbach, 1952) was from 0.60 to 0.85, which means the questionnaire yielded valid results. Table 1 summarizes the information of the participants in terms of the average educational performance and the age specification.

**Table 1**

Educational performance and age specification of the participants

Average educational score	Frequency	%	Accumulate	Age	Frequency	%	Accumulate
Under 10	13	6.5	6.5	12	9	4.5	4.5
Between 10 to 15	82	41	47.5	13	25	10.5	15.0
Between 15 to 18	66	33	80.5	14	85	42.5	57.5
Above 18	39	19.5	100	15	85	42.5	100
Sum	200	100				100	

Table 2 summarizes personal characteristics of the participants in terms of the season they were born and the order they were born, i.e. whether the participant is the first child, second, etc.

**Table 2**

Personal characteristics of the participants in terms of the season and the order they were born

Season	Frequency	%	Accumulate	Order	Frequency	%	Accumulate
Spring	40	30	30	1	50	25	25
Summer	44	22	52	2	84	42	67
Fall	49	24.5	76.5	3	48	24	91
Winter	47	23.5	100	4 and more	18	9	100
	200	100				100	

Table 3 summarizes personal characteristics of the participants in terms of their fathers' job.

**Table 3**

Personal characteristics of the participants in terms of their parents' jobs

Father's Job	Freq.	%	Accumulate	Mother's Job	Freq.	%	Accumulate
Governmental employee	44	22	22	Governmental employee	14	7	7
Businessman	108	54	76	Teacher	74	37	44
Retired	38	19	95	Home keeper	112	56	100
Others	10	5	100	Others	-	-	100
	200	100				100	

Table 4 summarizes personal characteristics of the participants in terms of their accommodation and parents' age.

**Table 4**

Personal characteristics of the participants in terms of accommodation and parents' age

Accommodation	Freq.	%	Mother's Age	Freq.	%	Accumulate	Father's Age	Freq.	%	Accumulate
Apartment	80	40	Under 30	44	22	22	Under 30	24	12	12
House	92	46	30-40	89	44.5	66.5	30-40	71	35.5	47.5
Lease	28	14	40-50	53	26.5	93	40-50	71	35.5	83.0
	200	100	Above 50	14	7	100	Above 50	34	17	100

In this survey, only five percent of the people's parents who participate in our survey had less than \$350 US income, 47 percent earned between \$350 US to \$550 US, 40 percent had between \$550 to \$900 US and 8 percent had over 900\$ income. Table 5 summarizes personal characteristics of the participants in terms of their parents' educational background.

**Table 5**

Personal characteristics of the participants in terms of their parents' educational background

Father's years of educations	Freq.	%	Accumulate	Mothers' years of educations	%	Accumulate
0	23	11.5	11.5	68	34	34
8	102	51	62.5	88	44	78
12-14	63	31.5	94	39	19.5	97.5
>14	12	6	100	5	2.5	100

Based on the results discussed in this survey we present the details of our survey in the next section.

### 3. Results

In this section, we present details of our survey results for the proposed study of this paper. We have setup nine hypotheses and examine the results based on statistical observations such as t-student and f-student.

#### 3.1 The relationship between the average academic performance and high-risk behavior

The first question is to know whether there is any possible relationship between educational performance and high-risk behavior among female and male teenagers.

3.1.1 *There is a relationship between the average academic performance and high-risk behavior among male teenagers.*

**Table 6**

The relationship between average academic performance and high-risk behavior among male teenagers

Score	Average	Standard deviation	F-value	p-value
Under 10	45.69	1.7		
10-15	41.17	3.9	22.57	0.001
15-18	45.51	3.1		
18-20	48.69	2.7		

As we can observe from Table 6, the statistical test confirms that there is a meaningful relationship (under  $p \leq 0.05$ ) between academic performance and high-risk behavior among male teenagers.

3.1.2 *There is a relationship between the average academic performance and high-risk behavior among female teenagers.*

**Table 7**

The relationship between average academic performance and high-risk behavior among female teenagers

Score	Average	Standard deviation	F-value	p-value
Under 10	-	-		
10-15	41.65	2.91	2.5	0.087
15-18	39.92	4.73		
18-20	41.80	3.78		

As we can observe from Table 7, the statistical test dose not confirm any meaningful relationship (under  $p \leq 0.05$ ) between academic performance and high-risk behavior among female teenagers.

3.1.3 *There is a relationship between the average academic performance and high-risk behavior among male teenagers for pairwise comparison of the teenagers.*

One important question is to know whether there is any meaningful relationship between average academic performance and high-risk behavior by making pairwise comparison of four groups mentioned in Table 7 and Table 8 summarizes the details of our comparison.

**Table 8**

Pairwise comparisons of academic performance and high-risk behavior among male teenagers

Comparison	Mean difference	p-value
Under 10 with 10-15	4.52	0.001
10-15 with 15-18	4.34	0.001
15-18 with 18-20	3.17	0.006
Under 10 with 18-20	3.00	0.025
10-15 with 18-20	7.52	0.001

3.2. *The relationship between gender and high-risk behavior*

As we can see from the results of Table 8, there is a meaningful difference between high-risk behavior and academic performance among pairwise comparisons of different groups for male teenagers.

3.2.1 *There is a relationship between the gender and high-risk behavior among teenagers.*

**Table 9**

The relationship between gender and high-risk behavior among teenagers

Gender	Average	Standard deviation	t-student	p-value
Male	43.91	4.31	4.92	0.000
Female	41.02	3.98		

As we can observe from Table 9, the statistical test confirms that there is a meaningful relationship (under  $p \leq 0.05$ ) between gender and high-risk behavior among teenagers.

*3.2.2 There is a relationship between the season of birth and high-risk behavior among male teenagers.*

**Table 10**

The relationship between average season of birth and high-risk behavior among male teenagers

Season	Average	Standard deviation	F-value	p-value
Spring	41.46	4.58	12.18	0.001
Summer	42.64	3.00		
Fall	46.66	3.86		
Winter	46.27	2.82		

As we can observe from Table 10, the statistical test confirms that there is a meaningful relationship (under  $p \leq 0.05$ ) between the season of birth and high-risk behavior among male teenagers.

*3.2.3 There is a relationship between the season of birth and high-risk behavior among female teenagers.*

**Table 11**

The relationship between average season of birth and high-risk behavior among female teenagers

Season	Average	Standard deviation	F-value	p-value
Spring	41.70	2.53	22.96	0.001
Summer	44.18	3.91		
Fall	42.60	3.61		
Winter	37.20	2.58		

As we can observe from Table 11, the statistical test confirms that there is a meaningful relationship (under  $p \leq 0.05$ ) between the season of birth and high-risk behavior among female teenagers.

*3.2.4 There is a relationship between the season of birth and high-risk behavior among male teenagers for pairwise comparison of different seasons.*

In this section, we wish to know whether there is any meaningful relationship between season of birth and high-risk behavior by making pairwise comparisons of four seasons. Table 12 summarizes the details of our comparisons and based on the results we can conclude that there is meaningful relationship among pairwise comparison of different seasons and high-risk behavior among male teenagers.

**Table 12**

Pairwise comparisons of academic performance and high-risk behavior among male teenagers

Comparison	Mean difference	p-value
Spring and Fall	5.2	0.001
Spring and Winter	4.8	0.001
Summer and Fall	4.02	0.001
Summer and Winter	3.63	0.002

### 3.2.5 *There is a relationship between the season of birth and high-risk behavior among female teenagers for pairwise comparison of different seasons.*

In this section, we wish to know whether there is any meaningful relationship between season of birth and high-risk behavior by making pairwise comparisons of four seasons. Table 13 summarizes the details of our comparisons and based on the results we can conclude that there is meaningful relationship among pairwise comparison of different seasons and high-risk behavior among female teenagers.

**Table 13**

Pairwise comparisons of academic performance and high-risk behavior among female teenagers

Comparison	Mean difference	p-value
Spring and Fall	2.48	0.001
Spring and Winter	4.49	0.001
Summer and Fall	6.98	0.001
Summer and Winter	5.39	0.001

### 3.3 *The relationship between the order of birth and high-risk behavior*

In this section, we study the relationship between the order of birth and high-risk behavior. In other words we want to know whether it makes a difference when a person is the first member of a family, the second member of a family, etc.

#### 3.3.1 *There is meaningful relationship between the order of birth and high-risk behavior among male teenagers*

The first part of the study of this section focuses on the relationship between the order of birth and high-risk behavior among male teenagers. Table 14 summarizes the details of our comparisons.

**Table 14**

The relationship between average order of birthday and high-risk behavior among male teenagers

Order	Average	Standard deviation	F-value	p-value
First	40.83	5.84		
Second	43.58	2.72	6.23	0.001
Third	44.63	4.27		
Fourth and more	46.38	3.31		

As we can observe from Table 14, the statistical test confirms that there is a meaningful relationship (under  $p \leq 0.05$ ) between the order of birth and high-risk behavior among male teenagers.

#### 3.3.2 *There is meaningful relationship between the order of birth and high-risk behavior among female teenagers*

The second part of the study of this section focuses on the relationship between the order of birth and high-risk behavior among female teenagers. Table 15 summarizes the details of our comparisons.

**Table 15**

The relationship between average order of birthday and high-risk behavior among female teenagers

Order	Average	Standard deviation	F-value	p-value
First	40.96	2.70		
Second	40.74	3.95	0.548	0.580
Third	41.88	5.76		
Fourth and more	-	-		

As we can observe from Table 15, the statistical test does not confirm that there is any meaningful relationship (under  $p \leq 0.05$ ) between the order of birth and high-risk behavior among female teenagers.

### 3.4 The relationship between the family income and high-risk behavior

#### 3.4.1 There is meaningful relationship between the family income and high-risk behavior among male teenagers

The first part of the study of this section focuses on the relationship between the family income and high-risk behavior among male teenagers. Table 16 summarizes the details of our comparisons.

**Table 16**

The relationship between average family income and high-risk behavior among male teenagers

Income	Average	Standard deviation	F-value	p-value
Under \$350 US	-	-		
\$350-\$550	42.26	4.78	5.66	0.005
\$550-\$900	44.91	3.78		
More than \$900	45.70	2.21		

As we can observe from Table 16, the statistical test confirms that there is a meaningful relationship (under  $p \leq 0.05$ ) between the order of birth and high-risk behavior among male teenagers.

#### 3.4.2 There is meaningful relationship between the family income and high-risk behavior among female teenagers

The first part of the study of this section focuses on the relationship between the family income and high-risk behavior among female teenagers. Table 17 summarizes the details of our comparisons.

**Table 16**

The relationship between average family income and high-risk behavior among female teenagers

Income	Average	Standard deviation	F-value	p-value
Under \$350 US	41.20	5.28		
\$350-\$550	39.92	3.11	3.77	0.021
\$550-\$900	42.61	4.65		
More than \$900	42.16	1.94		

As we can observe from Table 17, the statistical test confirms that there is a meaningful relationship (under  $p \leq 0.05$ ) between the order of birth and high-risk behavior among female teenagers.

## 4. Conclusion

In this paper, we have investigated different factors influencing high-risk behavior among teenagers who live in a city of Esfahan, Iran. The proposed study designed a questionnaire and distributed between two groups of female and male teenagers each with a sample size of 100 teenagers. The results indicated that while there is a meaningful relationship between high-risk behaviors and average high school marks among male students, there is no meaningful relationship between high-risk behaviors and high school grades among female students. The results also indicated that there was a meaningful difference between gender and high-risk behavior. The season of birth for female and male students is another important factor for having high-risk behaviors. While the order of birth plays an important role among male students, the order of birth was not considered as an important

factor among female teenagers. Finally, the results indicate that teenagers' parental financial affordability plays a vital role on both female and male teenagers.

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