

The Magnitude and Predictors of Socially Concealed Behaviors (Violence) among Adolescents Visiting Primary Health Care Centers in Jeddah City, Kingdom of Saudi Arabia, Jeddah - 2017

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ABSTRACT

Introduction: Studies illustrated that adolescents' neurological development as decision-making and future-oriented thinking is not fully developed, making them more vulnerable to several risky behaviors. Risky behaviors problem among adolescents are usually hidden especially in conservative community, therefore, the current research describes adolescents' risky behavior focus on the socially concealed behavior such as violence.

Materials and Methods: The present cross sectional analytical study was carried out among 817 participants at primary health care centers (PHCCs) belonging to the Ministry of Health according to municipal of Jeddah, Saudi Arabia. Data was collected from the participants through a self–administered questionnaire. Analytical statistics were done in the form of Chi Square tests ($\chi 2$) test and Fisher exact test and p value less than 0.05 was considered as a level of significance.

Results: Violent behavior was observed in both genders, and the evaluated results have highlighted that, unlike the common conception that males are usually involved in physical fights during the adolescence, females in the studied sample were more involved in physical fights than males, *p*<0.001. However, females in the current study were found to be more exposed to physical injuries while going out rather than in the educational institutes, *p*<0.001. Females were significantly more likely to be bullied electronically through instant messaging, website or texting (15.8%) than males (10.4%).

The predictors of threatening someone shows that older participants (Odds ratio, 1.412; 95% CI; 1.079, 1.846) who are divorced compared to singles (Odds ratio, 4.488; 95% CI; 1.129, 17.849) and living in public houses compared to those in villas (Odds ratio, 5.703; 95% CI; 1.665, 19.527) p<0.05.

Conclusion: The risky behaviors including violence, shows that adolescents get highly effected by parental relationship and living conditions. The current study has added a significant insight and played a special role in literature by adding the effect of gender difference and debate parental relationship on Adolescents and their variant patterns towards risky behaviors.

Keywords: Adolescence; Prevalence; Risky Behaviors; Violence.

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INTRODUCTION

Adolescence is the stage of transition from childhood to adulthood which represents the time between age of beginning puberty and onset of adult identity. Therefore adolescence not only includes teenagers, but also involves the age period from 10 to 24 years and it embraces three developmental phases; young adolescence (10-14 years old); older adolescence (15-19 years old) and young adults (20-24 years old). The age range specification for the adolescence differs from one organization to another. The Health Resources and Services Administration's Bright Futures (HRSA) guidelines for health supervision describes the age period for adolescence as 11-21 years of age, while The World Health

Organization defines the age period for adolescence as 10-19 years of age.4

Studies illustrated that adolescents' neurological development as decision-making and future-oriented thinking is not fully developed, making them more vulnerable to several risky behaviors.⁵ Additionally, their cognitive immaturity make them more susceptible to peers' influence and involvement in risky behaviors.⁶ Risky behaviors are activities which increase the risk of disease or injury,^{7,8} with subsequent adverse impact on one's achievements and future progress, it include cigarette smoking, substance abuse, sexual abuse and violence that could disturb

natural growth of the adolescents and reduce their expected normal participation in life.^{9,10}

The consequences of risky behaviors involve non-adherence to social or family norms with violent behaviors, disobedience, dishonest, stealing, and property destructive behavior, these problems have negative effects on adolescents' health and society in general, especially with inclusion of the adolescent in illegal activities, dangerous behaviors later on, and increased likelihood of suicide attempts and homicide making a big loss of this age group.¹¹⁻¹⁵

Therefore, the current research describes adolescents' risky behaviors focus on the socially concealed behavior such as violence. Risky behaviors problem among adolescents are usually hidden especially in conservative community, so exploring them will help in planning proper effective solutions as well as will improve adolescents' healthy development and well-being by determining risky behaviors that could endanger their life.

MATERIALS AND METHODS

The present cross sectional analytical study was carried out among 817 participants at primary health care centers (PHCCs) belonging to the Ministry of Health (MOH) distributed over five main geographic sectors namely. (Northwest, Northeast, Southwest, Southeast and Central) according to municipal of Jeddah, Saudi Arabia. In Jeddah, 46 PHCCs (n=46) serve as the first line of care in the healthcare system, and all health services that target the entire population are delivered through these centers. Therefore, we chose to carry out the study in 10 PHCCs selected randomly. Prevalence of violence among adolescents visiting PHCCs in Jeddah city was estimated and possible risk factors for this risky behaviors of the study population was identified using a logistic regression model, where selection of the independent variables against the study main dimension (namely, violence) were considered for the predictive model, as appropriate.

Approval letters of the study's proposal was obtained from the Community Medicine Research Committee at the Joint

Program of Family and Community Medicine in Jeddah; as well as permissions to carry out the study from Research Department, Public Health Administration, Jeddah. Permission to collect the data was obtained from health authorities and the ethics committee of the MOH in Jeddah. A written informed consent was provided to the participants before participation in the study, the collected data were set to be treated with confidentiality and not to be disclosed for any reason, except to serve the purposes of the study.

The study participants were recruited for the study by using multistage random sampling technique. The sample size was calculated by Epi-Info, version 7 software with a power of 80 %, confidence interval level 95 %, sample errors 5 %. Adolescent aged < 15 years or > 19 years old and Non Saudi were excluded from the study.

Data was collected from the participants through a self-administered questionnaire adapted from a study conducted in Taif, Saudi Arabia, which covered determinants of risky health behaviors. After securing official consents, each questionnaire has a brief introduction stating the aim of the study, and indicated that the information given would be treated with extreme confidentiality.

The pilot study was conducted on 50 adolescents to ensure feasibility of the study along with its applicability within the timeframe, as well as giving proper training for the author's assistants.

Data was coded, entered and managed using excel sheets, then imported into Statistical Package for Social Sciences (SPSS) version 21. Descriptive analysis was computed in the form of frequency and percentages, while mean, median and standard deviation was used for quantitative values, as appropriate. Analytical statistics were done in the form of Chi Square tests (χ 2) to test for the association and/or the difference between two categorical variables. Fisher exact test were utilized whenever appropriate (if more than 20% of cells have expected count less than five, or one cell has excepted count less than one). P value less than 0.05 was considered as a level of significance.

Table 1: Demographic characteristics of the screened participants (n=817).

Characteristics		No.	Percentage
Gender	Male	265	32.4
	Female	552	67.6
Age	15 years	42	5.1
	16 years	205	25.1
	17 years	300	36.7
	18 years	181	22.2
	≥19 years	89	10.9
Grade (n=817)	Intermediate School	164	20.2
	High school, first Grade	118	14.6
	High school, second grade (Literate)	122	15.1
	High school, Second grade (science)	151	18.6
	High school, third grade (Literate)	86	10.6
	High school, third grade (science)	97	12.0
	Others	72	8.9
Marital status (n=782)	Single	753	96.3
	Married	11	1.4
	Divorced	18	2.3

Table 2: Characteristics of the households and housing conditions of the screened participants (n=817).

Households and housing conditions		No.	Percentage	
Education level of the father (n=803)	Illiterate	15	1.9	
	primary	67	8.3	
	intermediate	97	12.1	
	secondary	243	30.3	
	University	272	33.9	
	Postgraduate	109	13.6	
Education level of the mother (n=808)	Illiterate	59	7.3	
	primary	106	13.1	
	intermediate	117	14.5	
	secondary	252	31.2	
	University	218	27.0	
	Postgraduate	56	6.9	
Monthly income (n=328)	<5000 SR	69	21.0	
	5000-<10000 SR	77	23.5	
	≥ 10000 SR	182	55.5	
Parental relationship (n=805)	Good relationship	524	65.1	
	Good relationship with some conflicts	150	18.6	
	Unrested relationship	44	5.5	
	Divorced	71	8.8	
	Others	16	2.0	
Student lives with parents (n=811)	Yes	709	87.4	
- ,	No	102	12.6	
Family members (median, IQR)	Number of family members	6(5-8 members		
	Number of boys	3(2-4 boys)		
	Number of girls	3(1-4 girls)		
	Order of the student (mode)	3rd		

RESULTS

According to the study design, a total number of 817 participants (552 females and 265 males) were randomly selected from PHCCs in Jeddah to assess risky behaviors and its pertinent factors. Females constituted almost two thirds of the participants (67.6%). The majority of the interviewed participants were aged 16 years or older (94.9%), with a median of 17 years, as shown in Table 1. Only 1.4% of the participants indicated that they were married and 2.3% were divorced.

Table 2 demonstrates that, while one half of the participants (47.5%) indicated that their fathers have high education levels. with either university qualification (33.9%) or postgraduate degrees (13.6%), the percentage was lower for the mothers (33.9%). More than one half of the participants pointed out that they have monthly income ≥ 10000 SR. Regarding parental relationship, two thirds of the participants expressed that their parents had good relation (65.1%), on the other side, 5.5% described it as unrested relationship, in addition to 8.8% who claimed that their parents are divorced. On the same line, 12.6% of the participants addressed that they are not living with their parents. The average number of family members with whom the participants are living is six members (IQR; 5-8), with an average number of boys as three (IQR; 2-4) and average number of girls as three (IQR; 1-4). Mostly, the interviewed participants were the ordered as the third within their siblings (mode=3).

Table 3 shows that 9.8% of the male participants and 11.6% of the females had been exposed threaten in the past 12 months which is not a significant difference p>0.05. However, although a significantly higher proportion of the female participants (55.3%) had been involved in physical fights than males (34.7%) p<0.05, there was no statistically significant difference regarding involvement in fights in general resulting in injuries which necessitated medical intervention. In the school properties, no statistically significant difference was found between males and female participants regarding exposure to fights (8.3% vs 7.8%) nor bullying (9.6% vs 8.6%). However, in outdoor, a significantly greater percentage of the female (52.5%) than male participants (26.4%) indicated that they had been exposed to physical hurt p<0.05. Also, females were significantly more likely to be bullied electronically through instant messaging, website or texting (15.8%) than males (10.4%). Nevertheless, a significantly higher percentage of the male participants (22.5%) than females (14.7%) expressed that they had threatened someone face to face, by phone or through electronic media p<0.05. The predictors of exposure to violence are illustrated in Table 4, which shows that older participants (Odds ratio, 1.412; 95% CI; 1.079, 1.846) who are divorced compared to singles (Odds ratio, 4.488; 95% CI; 1.129, 17.849) and living in public houses compared to those in villas (Odds ratio, 5.703; 95% CI; 1.665, 19.527) p<0.05.

Table 3: Exposure to violence in the past 12 months according to gender of the screened participants.

Violence	Gender					
	Males		Fe	males	X2	P*
	No	%	No	%		
Threatened or injured with a weapon						
Yes	26	9.8%	64	11.6%		
No	239	90.2%	488	88.4%	0.581	0.446
Had physical fight						
Yes	92	34.7%	305	55.3%		
No	173	65.3%	247	44.7%	30.229	<0.001**
Had physical fight resulted in injury which n	ecessitated r	nedical interve	ention			
Yes	35	13.2%	72	13.0%		
No	230	86.8%	480	87.0%	0.004	0.948
Had physical fight in the school property						
Yes	22	8.3%	43	7.8%		
No	243	91.7%	509	92.2%	0.219	0.640
Bullied in the school property						
Yes	25	9.6%	47	8.6%		
No	236	90.4%	501	91.4%	0.219	0.640
Physical hurt on going out						
Yes	70	26.4%	290	52.5%		
No	195	73.6%	262	47.5%	49.565	<0.001**
Electronically bullied						
Yes	27	10.4%	87	15.8%		
No	233	89.6%	464	84.2%	4.271	0.039**
Threaten someone face to face or electronic	ally					
Yes	59	22.5%	81	14.7%		
No	203	77.5%	470	85.3%	7.615	0.006**

^{*} Based on Chi Square

Table 4: Exposure to violence in the past 12 months according to gender of the screened participants.

	В	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Age	.345	.137	6.335	1	.012	1.412	1.079	1.846
Social Status (Single)			5.338	2	.069			
Social Status(Married)	1.021	1.048	.948	1	.330	2.775	.356	21.642
Social Status(Divorced)	1.502	.704	4.545	1	.033	4.488	1.129	17.849
Housing type (Villa			10.162	2	.006			
Housing types (Flat))	063-	.361	.030	1	.863	.939	.463	1.907
Housing type (Public house)	1.741	.628	7.685	1	.006	5.703	1.665	19.527
Constant	2.572	.569	20.405	1	.000	.076		

Variables excluded from the final model: Gender, father mother relation, housing ownership, monthly income.

DISCUSSION

In Saudi Arabia, hidden risky behaviors as violence were anticipated to be more prevalent during adolescence period, yet there are no scientific information available to consider the magnitude of the problem and its impact on health, which could be attributed to the fact that, In a conservative society like Saudi Arabia, the risky behaviors are usually concealed. In this research we aim to explore those violence risky behaviors of adolescents. Violence was reported to be a dominating risky

behavior observed among adolescence that had significant negative outcomes both physically and mentally.¹⁸ Bullying and physical violence had rose problems of public health and social behavior. The results of current study were consistent with the prior literature as physical violence along with bullying were witnessed in studied adolescence.^{19,20} Violent behavior was observed in both genders, and the evaluated results have highlighted that, unlike the common conception that males are

^{**} Statistically significant

usually involved in physical fights during the adolescence, females in the studied sample were more involved in physical fights than males, p<0.001. However, females in the current study were found to be more exposed to physical injuries while going out rather than in the educational institutes, p<0.001. These figures assert with Barnawi et al21 which noted that the females are more vulnerable to major cases of abuse and violence as compared to the males. In fact, in a patriarchal society like Saudi Arabia, the females are considerably exposed to various aspects of violence.22 The study found out that within the school setting, the magnitude of violence meted against the females as compared to the males, has no significant difference. Comparatively, outside the school setting, the females were more exposed to violence as compared to the males. Generally, this affirms the assertions of Al Buhairan et al²³ that within the Saudi society, women are generally vulnerable to violent episodes, however, it seems like the females find some sort of protection within the school setting as deduced in the study and the trend of bullying was changed to electronic bullying. Previous researches indicated that electronic devices provided an easy way to approach an individual, and it was being used for bullying. Furthermore, they reported that bullying had moved beyond the school walls, for example, Cyber bullying had provided a penalty of space to the school going individuals.²⁴ In this study, the analysis of results showed that, compared to males, females significantly faced Cyber bullying.

The risky behaviors of adolescents were reported to be attributed significantly to the living conditions, which is asserted in previous studies. To evaluate the present living condition of the individuals, parental education, parental relationships and monthly salary were analyzed, if was found that parents were mostly educated, they had no financial issues and had a good relationship with each other. Moreover, Children who have been brought up in what is referred to as "broken homes" tend to be more exposed to various instances of juvenile delinquencies as compared to those with completed families. 26

Notably in this study; old age, being divorced, and living in public houses was a significant predictor of threatening others either face to face or electronically. Additionally, renting a house to live in, as well as financial problems, was statistically significant major causes of depression among adolescents, who did not earn for themselves and for their families. Where depression leads to substance use, especially smoking to relieve their psychological upset, as previously demonstrated. ²⁷

Parental separation and unrested relationship was reported to be a major cause of psychological issues in previous studies. Al-Eissa et al²⁹ note that discipline is well enforced on children when both parents are engaged. The findings of this study echo the assertions of Beaver et al³⁰ that divorce, or parental separation has a fundamental implication on the development of a child; since it was reported that the most important cause of risky behavior among adolescents was the unrested parental relationships.³¹

Connolly²⁶ furthers this thought by noting that stable homes give the children an opportunity to engage their parents in various issues affecting them. This means that if parents are not engaged in counseling the learners on various aspects of life affecting them, then there is a highly likelihood that the children or adolescents for that matter, will be more exposed to several instances of delinquency in the society.³²

Lack of national statistics hindered the ability of the research to compare the local results with national figures. The data was collected via self-administer questionnaires, it included some sensitive data about culturally-inappropriate behaviors, the reality as well as the accuracy of these data cannot be guaranteed.

CONCLUSION

The risky behaviors such as violence, shows that adolescents get highly effected by parental relationship and living conditions. The current study has added a significant insight and played special role in literature by adding the effect of gender difference and debate parental relationship on Adolescents and their variant patterns towards risky behaviors. The study has called attention towards the insufficient research on concealed behaviors in Arabic society that can help to improve the healthcare system. Females in Saudi Arabia, unlike expected, were more involved in physical fights, being hurt on going out, and being bullied.

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