

# **SELF-ESTEEM, DEPRESSIVE SYMPTOMATOLOGY, AND SUICIDAL IDEATION IN ADOLESCENTS: RESULTS OF THREE STUDIES**

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## **SUMMARY**

Suicidal behavior has different levels: ideation, contemplation, planning and preparation, attempt, and consummation. Likewise, suicidal behavior comprises all the actions aimed at achieving suicide.

During adolescence there is a tendency to a reduction of emotional well-being. Thus, adolescents may engage in dangerous behavior, extreme narcissism and individualization, exclusion and social isolation.

Another element playing an important role during adolescence is self-esteem. Low self-esteem could lead to apathy, isolation, and passivity. Conversely, high self-esteem is associated with more active lives, a greater control over circumstances, less anxiety and greater capacity to cope with internal and external stress.

Although there are other factors that could predispose adolescents towards suicidal behavior, certain studies have identified depressive symptomatology as the most powerful and independent risk factor in suicidal ideation and it has been argued that it should be regarded as an expression of severe depression.

The purpose of this study is to explore the existence of a relationship between low self-esteem and depressive symptomatology with suicidal ideation and to explore if gender has an effect in this interaction. Data were obtained from three different samples of Mexican adolescent students. The instruments used were the Rosenberg Self-Esteem Scale, the CES-D, and the Roberts Suicidal Ideation Scale.

Women showed a higher frequency of low self-esteem than men in two studies. In another, men had a significantly higher frequency of low self-esteem. Regarding depressive symptomatology, women obtained higher scores than men. No significant differences were found in one study. The percentages of high suicidal ideation displayed greater variability by gender and by study. Among the subjects who reported high suicide ideation, a greater proportion of women tended to have low self-esteem, though these differences were not significant in any study. Over half of the women in each study reported higher suicidal ideation and depressive symptomatology than men, with significant differences only among junior high students in two studies.

The exploration of the link between depressive symptomatology and high suicidal ideation showed significant differences by gender, a finding which might be linked to the fact that women are more allowed to express their depressive or fatalistic feelings

and thoughts or death wishes, whereas among men this type of ideas are perceived as a sign of weakness.

Gender-related differences in low self-esteem were only found in one study; men had a higher percentage than women.

The comparison of low self-esteem in subjects with high suicidal ideation did not reveal any statistical difference by gender, despite it has been identified as a risk factor for suicidal behavior. In the other hand, results of depressive symptomatology concurred with international literature about this being a determinant factor in the presence of suicidal ideation in women.

Considering the objective of this study, three main conclusions can be suggested. First, low self-esteem is not significantly linked to suicidal ideation, perhaps because it is a risk factor more associated with suicidal behavior. Second, depressive symptomatology was related to suicidal ideation, and although this relationship and the one between depressive symptomatology and self-esteem have been reported before, it is important to note that there seems to be a domino effect among these problems. This effect could begin with depressive symptoms linked to suicidal ideation, which in turn could affect self-esteem, and subsequently trigger suicidal behavior. And third, differences between men and women raise the question of whether these are caused by intrinsic characteristics in a biological-genetic substrate inherent to each gender or whether they are determined by the cultural context and the formative patterns existing in the groups to which the subjects belong.

**Key words:** Self-esteem, depressive symptomatology, suicidal ideation.

## **RESUMEN**

El problema del suicidio ha cobrado mayor relevancia en años recientes. Esto se debe a la magnitud que ha alcanzado. El suicidio tiene un carácter multifactorial, es complejo, dinámico y creciente en nuestro país.

A su vez, la autoestima baja y el malestar depresivo se han vinculado con la conducta suicida en la adolescencia; los individuos vulnerables enfrentados a factores estresantes o que implican riesgo pueden llegar a presentar ideación o alguna conducta suicida.

El malestar depresivo se ha identificado como el factor de riesgo más importante para la ideación suicida. Esta se presenta de mane-

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ra diferente en hombres y en mujeres, por lo que se cree que su impacto está matizado por las características de los roles de género.

El propósito de este estudio es explorar si la autoestima baja y la sintomatología depresiva se relacionan con la ideación suicida, y si el sexo surte un efecto sobre esta interacción. Los datos se obtuvieron de tres estudios con adolescentes estudiantes mexicanos.

En el primero (secundaria, 1992-1993, Delegación Tlalpan), se utilizó un muestreo no probabilístico. La muestra incluyó a 423 adolescentes (56% hombres y 44% mujeres, con una media de edad de  $13.86 \pm 1.2$  años).

En el segundo (secundaria y bachillerato, 1996-1997, Delegación Coyoacán) participaron 816 adolescentes: 406 de secundaria (49% hombres y 51% mujeres, con una media de edad de  $13.27 \pm 1.1$  años), y 410 de bachillerato (51% hombres y 49% mujeres, con una media de edad de  $17 \pm 4.3$  años). El muestreo fue no probabilístico.

El tercero (secundaria, 1998-1999, Centro Histórico) incluyó a 936 estudiantes (54% hombres y 46% mujeres, con una media de edad de  $13.7 \pm 1.8$  años). El muestreo fue no probabilístico. Los tres estudios fueron transversales. El instrumento incluyó la Escala de Autoestima de Rosenberg, la CES-D y la Escala de Ideación Suicida de Roberts.

Se calcularon los puntos de corte para cada escala por sexo para identificar a los sujetos con baja autoestima, sintomatología depresiva e ideación suicida alta.

En dos estudios, las mujeres alcanzaron frecuencias más altas de autoestima baja, aunque las diferencias no fueron significativas. En el de 1999, los hombres tuvieron una frecuencia de autoestima baja significativamente más elevada que las mujeres. A su vez éstas alcanzaron puntajes significativamente más altos de sintomatología depresiva en los estudios de 1996 y 1999. En el caso de la ideación suicida, sólo hubo diferencias significativas en el estudio de 1999.

Las mujeres con ideación suicida mostraron porcentajes más elevados de autoestima baja (diferencia no significativa) y de sintomatología depresiva (con diferencias significativas en los estudios de 1996 y 1999) que los hombres.

La comparación de autoestima baja en los sujetos con ideación suicida no reveló diferencias significativas por sexo, a pesar de que éste se ha identificado como un factor de riesgo importante para la conducta suicida. Por otro lado, los resultados de sintomatología depresiva coinciden con lo reportado a nivel internacional en el sentido de considerar el sexo como un elemento determinante para la presencia de ideación suicida en las mujeres.

Teniendo en consideración el objetivo de este trabajo, se pueden señalar tres conclusiones: la autoestima baja no se asoció significativamente con la ideación suicida; esto se puede deber a que ésta es un factor de riesgo más relacionado con la conducta. Asimismo, la sintomatología depresiva se asoció con la ideación suicida, y aunque ésta y la que se da entre la sintomatología y la autoestima ya se han reportado, es importante señalar que parece haber un efecto en cadena entre estas problemáticas. Este efecto se originaría en los síntomas depresivos ligados con la ideación suicida, la cual puede afectar a la autoestima y ésta, a su vez, dispararía la conducta suicida. Finalmente, las diferencias entre hombres y mujeres dejan abierto el debate sobre si éstas se originan en factores biológicos inherentes al sexo o si están determinadas por los patrones de formación influidos por su parte por elementos contextuales caracterizados culturalmente.

**Palabras clave:** Autoestima, sintomatología depresiva, ideación suicida.

## INTRODUCTION

The problem of suicide, considered as any self-inflicted death (11), and the elements leading to it, has become increasingly significant in recent years. Suicide is a multi-factorial act, with both complex and dynamic elements, which is on the rise in Mexico. In 1992, there were 2247 suicides (1904 men, 2.58 per 100000 inhabitants; 343 women, 0.78 per 100000 inhabitants). The rates increased to 3339 suicides (2830 men, 5.8 per 100000 inhabitants; 509 women, 1.0 per 100000 inhabitants) in 1999, most of which occurred among the adolescent and youth population (34).

Several elements constitute the suicide phenomenon. One of these is suicidal behavior, which has different levels: ideation, contemplation, planning and preparation, attempt, and consummation (40). Suicidal behavior consists of all the actions executed for achieving suicide, and it begins with the ideation, which can be seen as any kind of thought focused on this goal.

Suicide rates have increased among adolescents over the past three decades (3, 15, 45), and some aspects have been identified as influencing this increase: the reduction of emotional well-being, certain degree of acceptance of suicide among young people, the mass media, and psychosocial changes in short periods of time. All of these represent what has been defined as a threatening society that increases uncertainty and could become a potential source of stress and vulnerability (13).

Adolescence involves a reduction of emotional well-being, since it is a stage of major developmental changes that place the subject in the middle of conflictive situations. For this reason, adolescents may engage in dangerous behavior, which could constitute attempts to overcome their feelings of handicap and helplessness, intense narcissism and individualization, exclusion and social isolation (9).

Self-esteem plays also an important role during adolescence for it leads to the construction of a solid and stable personality (44). There is evidence that low self-esteem could lead to a state of apathy, isolation, and passivity. Conversely, high self-esteem is associated with more active lives, a greater control over circumstances, less anxiety and a greater capacity to tolerate internal and external stress (7, 28, 54). Some authors have identified self-esteem as part of the vulnerability interacting with suicidal behavior. Thus, when vulnerable individuals, such as adolescents, face stressful or others factors that imply risk, such as symptoms of depression, they may show suicidal ideation or suicidal behavior (8, 10, 30).

Different studies have pointed out the link between low self-esteem and suicidal behavior, as well as the relationship between depression and suicidal ideation

(12, 27, 37, 52). Other researches focusing on adolescents have found a significant relationship between self-esteem and depressive symptoms (21, 24, 47, 50). This may be indicating an interconnection among these factors. Depressive syndrome is characterized by a series of symptoms that affect the emotional state of subjects (16, 29, 49), but it can also be considered just as depressive symptomatology.

There are other factors that could predispose adolescents to suicidal behavior. Certain studies have identified depressive symptomatology as the most powerful and independent risk factor in suicidal ideation (17, 20, 32) and it has even been argued that it should be regarded as an expression of severe depression (51, 52).

The purpose of this study is to explore the existence of a relationship between low self-esteem and depressive symptomatology with suicidal ideation and to explore if gender has an effect in this interaction. Data were obtained from three different samples of Mexican adolescent students. The procedure included:

- a) Calculation of the cut-off scores for the suicidal ideation, self-esteem and depressive symptoms scales, for men and women, on the basis of statistical criteria.
- b) Analysis of the relationship between self-esteem, depressive symptoms and suicidal ideation using a comparison by gender.

## MATERIALS AND METHOD

This study combines the results of three research projects carried out on different samples of students of different ages and from different areas in Mexico City.

### *Data analyses*

Analyses were performed using SPSS for Windows 10.0. Cut-off scores were calculated using the mean scores and the standard deviation in each subgroup for the three studies. The cut-off scores were used to determine possible cases of high suicidal ideation, low self-esteem, and high depressive symptomatology. Bivariate analyses of possible cases were conducted using chi squared analysis.

### *Study 1: Junior high school students, 1992-1993, Tlalpan District*

#### *Subjects*

Sampling was non-probabilistic. The sample included 423 junior high school students (55.6% men, 44.4% women, mean age of  $13.86 \pm 1.2$  years).

#### *Procedure*

A cross-sectional study was carried out in two schools, one public (low socio-economic status) and one private (medium socio-economic status), both located in the same district in southern Mexico City.

Questionnaires were filled out during school hours inside the classrooms for a 50-minute period of time. Researchers obtained permission from the school authorities, participation was voluntary, and anonymity was guaranteed.

### *Study 2: Junior high school and high school students, 1996-1997, Coyoacan District*

#### *Subjects*

Sampling was non-probabilistic. The sample included 816 students: 406 from junior high school (49.5% men, 51.5% women, mean age of  $13.27 \pm 1.1$  years) and 410 from high school (51% men and 49% women, mean age of  $17.0 \pm 4.3$  years).

#### *Procedure*

The study was cross-sectional and used a two-stage, stratified sample design (the first sampling unit was the school and the second, the classroom). The stratification variable was the socio-economic status determined by the monthly income calculated through the number of minimum salaries of the population living in the area. The two schools selected were of low socio-economic status from southern Mexico City. This level was determined on the basis of one to five minimum salaries, according to the Mexico City Marketing Map (2).

Questionnaires were filled out during school hours inside the classrooms for a 50-minute period of time. Researchers obtained permission from the school authorities, participation was voluntary, and anonymity was guaranteed.

### *Study 3: Junior high school students, 1998-1999, Downtown Area*

#### *Subjects*

Sampling was non-probabilistic. The sample included 936 students from two public junior high schools (54.3% men, 45.7% women, mean age of  $13.7 \pm 1.8$  years).

#### *Procedure*

The study was cross-sectional. Two public schools were selected, and school authorities provided the necessary support and facilities for the study.

Questionnaires were filled out during school hours inside the classrooms for a 50-minute period of time. Researchers obtained permission from the school authorities, participation was voluntary, and anonymity was guaranteed.

## Measures

### *Self-esteem* (43)

This scale has been tested on Mexican students, achieving internal consistency rates of .68 to .78 (20, 23).

In order to form a group of analysis with low self-esteem, cut off scores were calculated using one

TABLE 1. Scales cut-off scores by gender in the three studies

	1992 study										1996 study										1999 study									
	Junior high n= 423					Junior high n= 410					High school n = 406					Junior high n= 936					Women n= 428					Men n= 508				
	Women n= 188		Men n= 235		Women n= 198		Men n= 201		Women n= 201		Men n= 205		Women n= 428		Men n= 508															
	̄X	SD	Cut-off	̄X	SD	Cut-off	̄X	SD	Cut-off	̄X	SD	Cut-off	̄X	SD	Cut-off	̄X	SD	Cut-off	̄X	SD	Cut-off	̄X	SD	Cut-off	̄X	SD	Cut-off			
Self-esteem	29.3	4.4	25**	29.5	4.8	25**	27.3	4.9	22**	28.2	4.1	24**	30.7	4.7	26**	29.5	4.6	25**	21.7	3.7	18**	21.2	4.1	25**						
Depressive symptomatology	17.4	10.6	28*	15.8	8.9	25*	20.0	10.7	31*	16.9	7.9	25*	19.1	12.2	31*	15.7	9.1	25*	20.1	10.5	31*	15.9	8.5	24*						
Suicidal ideation	2.1	2.9	5*	1.6	2.3	4*	2.3	3.3	6*	2.2	2.9	5*	1.6	2.6	4*	1.7	2.4	4*	2.5	3.3	6*	1.6	2.6	4*						

\* = Cut-offs, rounded numbers, derived by using one standard deviation above the mean  
\*\* = Cut-offs, rounded numbers, derived by using one standard deviation below the mean

standard deviation below the mean, considering men and women separately.

#### *Depressive symptoms*

(Center for Epidemiological Studies on Depression Scale, CES-D) (38). This scale has obtained good internal consistency in Mexican students, with scores of over  $\alpha = 0.87$  (1, 18, 19, 25).

The cut-off score for depressive symptomatology was determined on the basis of the mean score plus one standard deviation, separately for each gender (39).

#### *Suicidal ideation* (41)

The scale has showed good internal consistency scores in Mexican adolescents (18, 22). The cut-off score for suicidal ideation was defined as the mean plus one standard deviation for each gender.

## RESULTS

Table 1 shows the cut-off scores for each scale. On the self-esteem and suicidal ideation scales, the scores were similar by gender in the three studies. Although the scores for women were higher than for men, there were no major changes in depressive symptomatology.

Women showed a higher frequency of low self-esteem than men in two studies (1992, 1996). Conversely, in the 1999 study men had a significantly higher frequency of low self-esteem. Regarding depressive symptomatology, women obtained significantly higher scores than men in the 1996 and 1999 studies. No significant difference was found in the 1992 study. The percentages of high suicidal ideation showed more variability by gender and study, and the only statistical difference was found in the 1999 study (table 2).

Among the subjects who reported high suicide ideation, a greater proportion of women tended to have low self-esteem, though these differences were not significant in any study. Over half of the women in each study reported higher suicidal ideation and depressive symptomatology than men, with significant differences only among junior high students in the 1996 and 1999 studies (table 3).

## DISCUSSION

Cut-off scores of each sample gave information in three different aspects. First, the scales are consistent: each one has obtained excellent reliability scores in Mexican students. Their precision in the measurement of these behaviors has placed them among the most frequently used, which has allowed for the comparison of results. Second, the statistical criterion to obtain the cut-off scores

TABLE 2. Distribution of low self-esteem, depressive symptomatology, and high suicidal ideation by gender in the three studies

SCALES	1992 study			1996 study			1999 study				
	Junior high n=423		Junior high n=410		High school n=406		Junior high n=936				
	Women n= 188	Men n= 235		Women n= 198	Men n= 201		Women n= 201	Men n= 205		Women n= 428	Men n= 508
	%	%	$\chi^2$	%	%	$\chi^2$	%	%	$\chi^2$	%	%
Low self-esteem	12.3	10.7	0.26	12.1	9.0	1.06	10.2	13.3	0.95	10.7	16.5
Depressive symptomatology	20.0	15.1	1.74	22.8	9.0	14.08 <sup>c</sup>	23.5	10.7	11.4 <sup>c</sup>	22.7	9.8
High suicidal ideation	24.7	19.6	1.57	19.2	20.4	0.09	19.1	20.5	0.11	21.5	14.0

a: p<=0.05, b: p<=0.01, c: p<=0.001

TABLE 3. Suicidal ideation compared with low self-esteem, depressive symptomatology, and gender in the three studies

SCALES	1992 study			1996 study			1999 study				
	Junior high n=423		Junior high n=410		High school n=406		Junior high n=936				
	Women n= 188	Men n= 235		Women n= 198	Men n= 201		Women n= 201	Men n= 205		Women n= 428	Men n= 508
	%	%	$\chi^2$	%	%	$\chi^2$	%	%	$\chi^2$	%	%
Low self-esteem	22.2	22.7	0.003	21.6	12.5	0.34	22.9	28.9	0.35	18.5	16.9
Depressive symptomatology	55.6	54.5	0.009	73.0	42.5	16.19 <sup>c</sup>	60.0	39.5	3.07	65.2	47.9

a: p<=0.05, b: p<=0.01, c: p<=0.001

constitutes a practical valid means of representing and identifying individuals who may be at risk, since the definition is based on the characteristics of the sample itself. Third, the cut-off scores do not vary by gender, remaining constant and similar for men and women.

Frequency of high suicidal ideation is similar to data reported in national studies (where it ranges from 1% to 40%), and in international studies (with variations from 3.4% to 52.9%) (34). Although the comparison by gender showed non significant differences, in the 1996 study on junior high and high school students, men showed higher suicidal ideation than women.

Results of depressive symptomatology concurred with others (4, 5, 6, 14, 33, 42, 46, 48, 53), where women tend to have higher rates.

The exploration of the link between depressive symptomatology and high suicidal ideation showed significant differences by gender (over half the women in each study had depressive symptomatology), which might be linked to the fact that women are more allowed to express their depressive or fatalistic feelings and thoughts or death wishes, whereas among men, this type of ideas are perceived as a sign of weakness (36). The environment could be encouraging the development of certain personality features attributed to each individual according to his/her gender, thereby providing the individual with elements that either protect or place him/her at risk.

Gender-related differences in low self-esteem were found only in the 1999 study, where men had a higher percentage than women. Self-esteem has been linked to anxiety, behavioral and neurotic disorders and to a lack of parental support (26, 31). In other words, these psychological characteristics are different from those related to depression, which might explain the fact that men are more likely to present low self-esteem while women are more likely to experiment depressive symptoms.

The comparison of low self-esteem in subjects with high suicidal ideation did not reveal any statistical difference by gender, despite it has been identified as a risk factor for suicidal behavior (attempted or actual suicide) (51, 52). In the other hand, results of depressive symptomatology showed it was a factor in the presence of suicidal ideation in women.

Significant differences in suicidal ideation were found only in the 1999 study. In fact, lower or similar rates were observed in the 1996 and 1999 studies in comparison with 1992, which is opposite to the general tendencies reported (3, 34, 35).

Considering the objective of this study, three main conclusions can be suggested. First, low self-esteem is not significantly linked to suicidal ideation, perhaps because it is a risk factor more associated with suicidal behavior (attempted and actual suicide) (51, 52).

Second, depressive symptomatology was related to

suicidal ideation, and although this relationship and that between depressive symptomatology and self-esteem have been reported before, it is important to note that there seems to be a domino effect among these problems. The problem could begin with depressive symptoms linked to suicidal ideation, which in turn could affect self-esteem, and subsequently trigger suicidal behavior.

This situation raises interesting questions about the way suicide is studied and attempts made to reduce its prevalence. Since depressive symptomatology and suicidal ideation are regarded as cognitive phenomena, self-esteem and attempted or actual suicide are considered as behavioral instances. Although this distinction may not be clear, there is an obvious need to consider the whole range of these problems for the purposes of prevention. While this is not a longitudinal study, the results seem to show a constant tendency over time, indicating that there could be a flaw in preventive measures adopted so far among this population.

Finally, the differences between men and women raise the question of whether these differences are caused by intrinsic characteristics in a biological-genetic substrate inherent to each gender or whether they are determined by the cultural context and the educative patterns existing in each social context. Regardless of the factors that determine the differences in suicidal ideation, depressive symptomatology and self-esteem, further studies are required to obtain a clearer gender perspective that allows for the use of different approaches to deal with the problems that affect each individual.

The task would imply examining current patterns of education, within the family and the school, on the basis of approaches and programs derived from the needs and experiences of individuals.

This study has certain limitations which should be taken into account in future studies. It was not originally designed for presenting comparative data, nor is it a longitudinal study, which would provide a richer perspective of the results. Likewise, although the statistical analyses were adequate at descriptive level, additional elements are required to use more robust procedures, which in turn would allow to reach more solid conclusions. Therefore, further studies are needed to provide a better understanding of suicide.

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