

## Adolescent Suicide and Attempted Suicide

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Violence is by far the most common cause of death in young people, especially in the form of suicide and motor vehicle accidents [1]. In the last two decades, motor accident fatalities have been decreasing while suicide has been increasing dramatically. In Israel, for example, the rate of suicide among 15 to 19 year old males was 2.5/100,000 in 1983–85 and rose to 7.9/100,000 by 1995–97 [2].

Gender analyses have shown that it is almost entirely the male population that accounts for the recent marked increase in youth suicide in many developed countries. This rise has been accompanied by an increase in the rates of illegitimacy, crime, alcoholism, and unemployment and a drop in the marriage rate [3]. Despite the immensity of this public health problem, however, little or no funding at all has been allocated for the prevention of this major killer. Thus, the article by Lifshitz and Gavrilov in this issue of *IMAJ* comes as a timely reminder of this pressing concern [4].

In addition to the successful suicides, many young people make deliberate, non-fatal attempts to kill themselves. This phenomenon, also known as "parasuicide" or "deliberate self-harm," is an acute clinical problem that is today 10 to 100 times more common than suicide. The exact prevalence is unknown [3]. Like for suicide, the last two decades have witnessed a massive increase in the west in the number of people taking intentional drug overdoses or deliberately injuring themselves.

The relationship between parasuicidal acts and suicide is still controversial, since most of the statistics are derived from hospital samples which represent only about one-third of actual attempted suicides. Unlike suicide, however, parasuicide is more common in females than in males, the sex ratio being highest during adolescence. The highest rates for females are in the 15 to 19 year age group. Indeed, deliberate self-poisoning has become the most common reason for acute hospital admission of adolescent females [5,6].

Unfortunately, the statistics regarding deliberate self-poisoning in Israel are very unreliable due to under-reporting, and there is no budget earmarked to monitor the problem. According to the only relevant study conducted to date, at Wolfson Hospital [7], 2,001 individuals from Holon and Bat Yam attempted suicide during the period 1990–98, with a total number of suicide attempts of 2,262. This group included 621 males (31.2%) and 1,330 females (66.8%), mean age 34.51 years (SD=18.78). The mean annual prevalence rate of suicide attempts for the same period for people over age 10 years was 75/100,000 for males and 153/100,000 for females. On the basis

of the WHO/EURO Multicenter Study, these numbers place Holon-Bat Yam eleventh among the European centers for males, and eighth for females. The suicide rate for Holon and Bat Yam for the over-10 year age group in the period 1990–95 was 15/100,000 for males and 7/100,000 for females, for an attempted suicide: suicide ratio of 5:1 for males and 22:1 for females.

A further breakdown by age group yielded the highest rates of attempted suicide in the 25–29 year age range (121.4/100,000), with a second, smaller peak after age 65. By contrast, the suicide rate for both male and female residents of Holon and Bat Yam increased with age.

In females alone, the highest rates of attempted suicide were found for ages 15–19 years (411/100,000). Except for the age range 65–74, females had a constantly higher rate of suicide attempts than males. The highest female:male ratio (9.5) was noted in the age range 10–14 years, and the mean female:male ratio for all age groups was 2.0. For completed suicide, the mean male:female ratio for the population of Holon and Bat Yam during the same period was 2.1.

Thirty-eight percent of the suicidal males and 41% of the females had a history of at least one previous suicide attempt. Previous suicidal behavior was significantly correlated with place of birth –  $\chi^2(2)=9.58; P<0.008$  – being more frequent among individuals of Asian or African origin (66%) compared with native Israelis (37%) and people of European or American descent (32%).

The Lifshitz and Gavrilov study was conducted at Soroka Medical Center in Beer Sheva and focused on adolescent self-poisoning. Acetaminophen has been found to be the drug most commonly used for self-poisoning in Europe and elsewhere [8]. This appears to be true for Beer Sheva as well. Their study is particularly worrying because the youngsters reported that they were aware of the potential toxicity of this agent. The Israel Ministry of Health seems to be oblivious to the dangers of this over-the-counter medication and has not taken any steps to curb its accessibility. In Britain, for instance, a simple legislative act limiting the size of pill packs has reduced the damage done by this agent in instances of self-poisoning [6].

Lifshitz and Gavrilov also note that depression was the most common antecedent of self-poisoning in their sample. This highlights yet another related problem [3]. Depression occurs at the rate of 2–3% in prepubertal children and 6–8% in adolescents. It is highly under-diagnosed, being an "internalized" disorder wherein the child often suffers in silence and does not make his/her problems known

to parents or teachers. School health professionals have neglected this area of prevention, so that most affected young people are not recognized until serious complications such as school failure, substance abuse and suicidal behaviors emerge [9].

One of the important dynamics in adolescent suicide is narcissistic injury, when even a cry for help is felt to be unacceptable to the ego ideal. In our psychological postmortem study of suicide among 18 to 21 year old male soldiers [10], we were impressed by the fact that many of the unexplainable suicides occurred among the most highly functional and successful youngsters who had committed suicide after the most minimal failures. In addition, many of these youngsters were described as being very "private" people for whom a "stiff upper lip" code did not allow for complaining or asking for help. The possibly greater acceptance of "crying for help" in girls may partly explain why attempted suicide is more common in boys [11]. Like for smoking, public health campaigns directed at the male population may prove to be effective.

Human beings have an extraordinary propensity to join hands with external forces in the attack upon their own existence [12]. The world today is a dangerous place, replete with sickness and accident, beasts and bacteria, the malignant forces of nature and the vengeful hands of human enemies. We could expect that surrounded by these overwhelming stresses from all sides, people would unite in a universal brotherhood of beleaguered humanity. Instead, however, we are faced with yet another enemy – this one from behind the lines, for one of the major forces that threaten man's existence is man himself, through self-destruction. Our understanding of this aspect underlies the challenge of the prevention of suicide and other high risk behaviors of adolescence.

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