Eur Arch Psychiatry Clin Neurosci (1993) 243:171–178

European Archives of Psychiatry and Clinical Neuroscience

Changes in suicidal behavior among nation-wide general population samples across Greece

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Received December 22, 1992

Summary. During recent years, two nationwide cross-sectional domestic surveys on psychosocial issues and health status were carried out in Greece. Both studies were conducted with identical methodology (personal interview) and screening instruments, with probability samples of 4083 adults aged 20–64 years (study A) and 3708 respondents of the same age range (study B). The time interval between the first and the second study was 6 years. The presence of self-reported suicidal behavior during the last month prior to the interview was examined. In study A, 2.8% of males and 6.8% of females respondents reported a recent suicide ideation compared to 6.4% of the males and 14.9% of the female suicide ideators in study B.

However, only 0.27% of the males and 1.10% of the females in study A attempted suicide. These proportions were doubled in study B. The prevalence of depressive symptoms on the Center of Epidemiologic Studies Depression scale was high among the respondents reporting a previous suicide ideation and suicide attempts.

Discriminant analysis revealed several social and psychiatric factors predicting suicidal behavior.

Key words: Suicidal ideation – Suicide attempts – Epidemiology – Cross-sectional – Home survey – Depressive symptoms

Introduction

The phenomenon of life-threatening behavior and self-destruction is prevalent in almost all geopolitical areas, although its occurrence varies across cultures (Stengel 1980).

Since the late 1960s and early 1970s most European countries have shown an increase in suicide rates and also in the frequencies of suicide attempts (Platt 1988; Hansen and Wang 1984).

Greece, like some other Southern European countries, is an example of a country with low suicide rates for these years (Bazas et al. 1979). However, during the last decades, rapid economic and increased social and cultural changes took place in Greece due immigration, migration, urbanization and industrialization. These social phenomena made Greek society more diversified and complex and gave rise to psychosocial stress-induced disorders (Madianos et al. 1985b, 1987b). The question is to what extent this transition in Greek society has also affected the prevalence of suicidal behavior in the general populations?

Based upon the assumption that socioeconomic change in recent years might have influenced the manifestation of suicidal behavior in the general Greek population, a comparison is made between the prevalence rates of suicidal ideation, suicide attempts and depressive symptoms, estimated from two nationwide cross-sectional domestic surveys carried out in 1978 and 1984 in Greece. Both surveys focused on certain psychosocial issues and mental health status, and were conducted with similar methodology and large probability samples (Madianos and Zarnari 1988; Madianos et al. 1987a; Madianos and Stefanis 1992).

It has to be noted that most studies on suicidal behavior are based on vital statistics, case registers, hospital, police or physicians' records (Kessler and MacRae 1983).

The prevalence of suicidal ideation and attempted suicide in general populations has hardly been explored, despite the fact that cross-sectional field surveys can provide a broad spectrum of information on self-destructive behavior with respect to the respondents' psychosocial status and a number of sociodemographic and other variables (Paykel et al. 1974; Kaplan and Pokorny 1976; Korczak 1988).

In this respect, our research approach on self-destructive behavior in the general Greek population could be considered an exception in the usual research stream.

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Table 1. Sociodemographic characteristics of respondents: study A and B nationwide samples in comparison to 1981 census characteristics[a]

		1978 $n = 4083$	1984 $n = 3706$	1981 Census population
Sex	Males	44.6	44.8	48.0
	Females	55.4	55.2	52.0
Age (years)	19–29	23.0	25.0	22.9
	30–44	33.7	35.0	34.0
	45–64	43.2	40.0	38.0
Years of schooling	0–6	57.4	51.7	58.4
	7–11	10.8	16.5	14.0
	12	20.5	19.2	18.2
	13 +	8.2	12.6	8.4
SES[b]	I	9.3	6.3	10.1
	II	26.7	25.2	23.7
	III	45.1	44.6	48.0
	IV	15.6	15.0	11.3
	V	7.3	8.9	6.9
Marital status	Single	16.3	20.8	19.8
	Married	77.4	74.5	76.7
	Widowed	4.4	2.8	3.9
	Divorced	1.9	1.9	1.6
Employment status	Unemployed	1.2	4.6	3.3
Residency	Greater Athens	34.5	35.2	33.8
	Thessaloniki	9.1	7.8	7.7
	Rest of urban	18.8	20.3	18.7
	Semi-urban-rural	37.7	36.7	40.4

[a] Ages 18–64 years
[b] SES = Education × Occupation

Material and methods

Design

Both surveys were cross-sectional. The first was carried out by the National Center for Social Research during a 6-month period in 1978 and the second by the Department of Psychiatry of Athens University during a 4-month period in 1984 (Madianos and Zarnari 1988; Madianos et al. 1987a). Both samples were four-stage systematic and comprised 4083 persons aged 19–64 years in the first, and 4292 respondents aged 12–17 years, and 18–64 years in the second survey. For reasons of comparability, the age group of 12–17 years in the second survey was excluded, so both survey samples included adults only. The samples were drawn randomly from all geographical strata (Athens greater area, city of Thesaloniki, rest of urban areas, semi-urban and rural areas). There was no overlap between the two samples.

The total population covered was 9,130,000. It represented the whole of Greece in terms of households, with the exception of the Aegean and Ionian islands (4.5% of the total population), which because of technical reasons, were not covered by the sampling. The sampling included listings of the existing households, in the randomly selected blocks and then a random selection of households with only one individual to be interviewed random, using the Kish selection grid (Kish 1965).

The average number of persons per household was 3.6 and 3.5 respectively for the 1978 and 1984 surveys. In the 1978 survey, the average number of persons per household for Athens semi-urban and rural and rest of urban areas was 3.3, 3.9 and 3.6, respectively. Similar figures were observed in the 1984 survey. No differences in the distribution of sizes of households in both samples were noticed.

The proportion of single-person households in the 1978 survey was 4.9%, and, in 1984, was 5.4%, while in the 1981 total population census it was 5.2%.

The sociodemographic characteristics of both survey sample respondents and the 1981 total population census are presented in Table 1. The data presented include the percentages of the actual number of persons surveyed according to sex, age group, years of schooling, socioeconmic status, marital status, employment and place of residence.

The slightly higher number of females compared to males in both samples corresponds to the general population rates shown in the third column of the table. Regarding the other variables, no differences in every variable breakdown were noticed, except for the unemployment rates. In the 1978 sample, only 1.2% were unemployed, while the proportion of unemployed respondents in 1984 reached 6.3%. It is of note that there was no overlap between the two samples. A comparison of the sociodemographic characteristics between the 1981 census and the two surveys revealed similarities in the distribution of all variables.

Hypotheses

With regard to previous literature on the epidemiology of suicidal behavior, three main hypotheses have been formulated.

1. Suicidal behavior is related to depressed mood and demoralization in general and unfavorable economic conditions such as unemployement. In a country like Greece, where certain socioeconomic changes within the 6-year interval between the two nationwide studies occurred, one could expect a parallel increase in the rates of suicidal behavior in the second study. Another expected finding is that respondents living in metropolitan and other urban areas

are exposed to a greater degree of stressful stimuli, suffer more from depressed mood, and also exhibit suicidal behaviour.
2. Although a large proportion of the respondents suffered from depressed mood also express suicidal ideation, few of them decided to attempt suicide.
3. Certain sociodemographic variables such as sex, age, place of residence, marital status, socioeconomic status, and some "clinical" variables, namely suffering from mental or psychosomatic disease, use of medication, drinking excessively and feeling depressed might predict the manifestation of suicidal behavior.

Measures

A pilot study preceded the main survey, in order to test the validity of the research instruments.

The respondents in both surveys were interviewed in their own private surroundings by trained interviewers, who were social workers. The training of interviewers lasted 3 weeks' including role playing and pilot interviews in clinical and non-clinical groups. The duration of the interviews was between 70 and 90 min. The overall response rate in the 1978 survey was 92% and in the 1984 survey 96.5%. Approximately 15% of the interviews in both surveys were checked again. If a first visit was unsuccesful, the interviewers continued their efforts to interview in a second visit. This approach could explain the low non-response rates. Confidentiality was established by a specific procedure. The name and the address of each respondent was written on a separate card attached to the main questionnaire, so that the interviewer knew who to interview, but this card was taken off the questionnaire before the interview started and was returned to the central research office. Thus each respondent's questionnaire identity code number was the only personal information known.

The interview was structured to obtain data on physical, mental health, suicidal behavior and related psychosocial issues (help-seeking patterns, drug and alcohol use, family medical history, etc.). Sociodemographic data were also obtained.

Suicidal behavior (a 12-month prevalence prior to the interview) included suicidal ideation (any overt suicidal behavior and communications except for overt acts) and suicide attempts (situations in which a person performs a life-threatening non-lethal behavior or gesture) (Beck et al. 1973). Both suicidal ideation and attempts were determined by specific questions. The seriousness of intent of the subject in his reported previous suicidal behavior was revealed by another item. In case of any indication of difficulty in understanding these questions, interviewers were instructed to probe. No discrepancies were noticed between the information obtained in the first and second interview, especially concerning suicidal behavior, on checking with 94% of the respondents.

The mental health status of the respondent was assessed by the use of the CES-D and the Langner scales (Langner 1962; Madianos 1984; Radloff 1977; Madianos and Stefanis 1992) standardized for the Greek population. Both scales provide categorical or numerical scores.

In this report, we present the mental health assessments based on the CES-D scale interviews using the categorical scores.

For comparison, the percentage of changes in total crude suicide rates per 100,000 males and females (mean 1972–73 to mean 1983–84) were also computed.

Statistical methods

The prevalence of the reported suicidal behavior (suicidal ideation and attempted suicide) in the samples is presented in form of cross-tabulation. All prevalence rates in the second survey are weighted. The statistical significance of the differences between the 1978 and 1984 prevalence rates was assessed by means of stastistic z for proportions with a specified characteristic in two independent samples (Fleiss 1973). In fact, each sample was selected independently from the other, drawn from the same geographical areas but from different locations (towns and villages).

In a second stage, a stepwise discriminant analysis for the prediction of those factors influencing the patterns of suicidal behavior was applied.

The statistical analysis was performed using the Statistical Package for Social Sciences X version (Norussis 1986).

Results

In the 1978 survey, 2.8% of males and 6.8% of females reported the existence of feelings of suicidal ideation compared to 6.4% of the males and 14.9% of the females suicide ideators in the 1984 survey (Table 2).

The differences are statistically significant at $P < 0.001$. However, only 0.27% of the males and 1.10% of the females of the 1978 sample attempted suicide in the 12-month period prior to the interview. These proportions doubled in the 1984 study (Table 3).

The ratios of male/female suicidal ideators and attempters in both surveys remained the same, the females being double the number of the males. However, if we look at the crude suicide rates per 100,000 in the same periods, the males are overrepresented.

The prevalence of depressive symptoms according to the CES-D scale was found in both surveys to be high among the respondents reporting a previous suicide ideation and attempt (Table 4).

Of the depressed males (16 or more score on the CES-D scale), 30% also reported a recent suicidal ideation in both 1978 and 1984.

Of the depressed female respondents, 27% reported a recent suicidal ideation and 17% attempted suicide in 1978. In 1984, 40% of the depressed females had experienced recent suicidal feeling and 23.2% of them had attempted suicide (Table 4). It must be noted that, in 1978, 3.5% of the respondents who had expressed sui-

Table 2. Nationwide prevalence of suicidal ideation in the 1978 and 1984 surveys

	1978	1984	Change (%)	Z	P
Males	51 (2.8)	99 (5.9)	+3.1	4.46	<0.001
Females	145 (6.4)	306 (14.9)	+8.5	9.18	<0.001
Total	196 (4.8)	405 (10.9)	+6.1	9.99	<0.001
Base for %	M 1820 F 2263	1658 2045			

Table 3. Nationwide prevalence of reported suicide attempts in the 1978 and 1984 surveys

	1978	1984	Change (%)	Z	P
Males	5 (0.2)	26 (1.5)	+1.3	3.87	<0.001
Females	25 (1.1)	71 (3.4)	+2.3	5.15	<0.001
Total	30 (0.7)	97 (2.6)	+1.9	6.46	<0.001
Base for %	M 1820 F 2263	1658 2045			

Table 4. Nationwide prevalence (%) of depressive mood, suicidal ideation and attempts in the 1978 and 1984 surveys

Sex	1978				1984			
	Total sample	Depressed mood[a]	Suicidal ideators	Attempted suicide	Total sample	Depressed mood[a]	Suicidal ideators	Attempted suicide
Males	1920 (100.0)	175 (9.4) (100.0)	51 (29.5) (100.0)	5 (9.8)	1660 (100.0)	255 (19.6) (100.0)	99 (30.7) (100.0)	26 (26.0)
Females	2263 (100.0)	527 (23.3) (100.0)	145 (27.4) (100.0)	25 (17.2)	2046 (100.0)	770 (37.6) (100.0)	306 (40.1) (100.0)	71 (23.2)

[a] A > 16 score on the CES-D scale

Table 5. Nationwide prevalence of suicidal ideation and reported suicide attempts by sex and age in the 1978 and 1984 surveys

Age (years)	1978								1984							
	19–35				36–64				19–35				36–64			
	M		F		M		F		M		F		M		F	
Suicidal ideation	12	1.9	45	5.4	39	3.2	100	7.0	18	2.6	101	11.6	81	8.2	205	17.4
Attempted suicide	1	0.1	6	0.7	4	0.4	19	1.3	7	1.0	23	2.6	19	2.0	67	4.1
Base for % M	624				1196				681				980			
F	827				1436				870				1177			

Table 6. Regional distribution of suicidal behaviour among the two nationwide samples

Areas	1978				1984			
	Suicidal ideation		Attempted suicide		Suicidal ideation		Attempted suicide	
	n	(%)	*n*	(%)	*n*	(%)	*n*	(%)
1. Greater Athens	107	54.6	20	66.7	226	55.8	65	67.0
2. Thessaloniki	13	6.6	2	6.7	31	7.4	6	6.2
3. Rest of urban	28	12.2	5	16.6	60	14.8	17	17.5
4. Semi-urban and rural	48	24.6	3	10.0	89	22.0	9	9.3
Total	196	100.0	30	100.0	405	100.0	97	100.0

cidal ideation were low scorers on CES-D scale (score < 16). In the 1984 survey, the same proportion (3.8%) of suicidal ideators were also low scorers on the CES-D scale.

On the other hand, all respondents reporting a previous suicide attempt were high scorers on the CES-D scale in both surveys. Table 5 presents the prevalence of suicidal ideation and reported attempts by age groups 19–35 years and 36–64 years and sex in both surveys.

It seems that in both surveys a higher proportion of males and females of the age group 36–64 years reported recent suicidal ideation or suicide attempt than their younger counterparts. The regional distribution of suicidal behavior among the low samples is shown in Table 6.

In both surveys, the vast majority of both suicidal ideators and attempters resided in Greater Athens and the rest of urban areas, while only a small proportion of them were residents of rural and semi-urban areas.

Table 7 presents the percentage of changes in total crude suicide rates per 100,000 males and females (mean 1972–73) to mean (1983–84) and the percentage of change in cases of respondents manifesting suicidal behavior and depressed mood.

There was an increase in all four categories, the highest percentage of change being observed in the number of male respondents reporting previous suicide attempts between 1978 and 1984. It is of note that the percentage of changes in prevalence of suicidal ideation and attempted suicide rates, shown in Tables 2 and 3, is lower than

Table 7. I. Change (%) in total crude suicide rates per 100,000 males and females, mean 1972–1973 to mean 1983–1984 II. Changes (%) in cases of self-reporting suicidal ideation and attempts of males and females III. Changes (%) in cases of depressed mood (1978–1984)

Change (%) in total crude suicide rates per 100,000 1972/73–1983/84		Change (%) in cases		
		of suicidal ideators 1978–1984	or reported suicidal attempts 1978–1984	of depressive mood[a]
Males	+33.3	+ 94.1	+120.0	+43.2
Females	+13.0	+111.0	+ 84.0	+46.0

[a] A > 16 score on CES-D scale

the percentage of changes in the number of suicidal persons between the two surveys.

A stepwise discriminant analysis of the 1984 data revealed several risk factors to be related to the phenomenon of self-destruction in the general Greek population (Table 8).

From a total of 35 independent variables, 18 predicted the manifestation of suicidal ideation. Another 16 variables predicted previous suicide attempts.

The profile of a suicidal ideator (probability 77.6%) would appear to be as follows: female, older than 35 years, of elementary education, unskilled worker on pensioner, currently unemployed, divorced, resident in Greater Athens, high scorer on the CES-D scale (cases of depressed mood), suffering from a mental discorder and a psychosomatic illness, using antidepressants and drinking excessively. Almost identical risk factors predict a suicide attempt, the probability being 86.2%. In both high-risk categories, the existence of family disruption by a mentally ill member was found to be a risk factor.

Discussion

Previous investigators have shown that suicide rates for the period 1960–1975 in Greece, are low, as compared to those of other European countries (Bazas et al. 1979; Platt 1988). However recent studies have reported a substantial increase in suicidal behavior during the last decade; this has also been noticed with regard to completed suicides and suicide attempts in some provinces of Greece (Beratis 1986; Dimitriou et al. 1986). This increase in suicidal behavior between 1978 and 1984 runs parallel to the impressive increase in the prevalence rates of depressed mood among respondents with a score of greater than 16 on the CES-D scale, from 17.0% in 1978 to 27.6% in 1984, and to the consecutive increase in the regional

Table 8. Stepwise discriminant analysis: classification function coefficients: Fisher's linear discriminant functions. Dependent variables suicidal ideation and suicide attempts (1984 study, $n = 3708$)

Suicidal ideation				Suicide attempts			
Variables		No	Yes	Variables		No	Yes
1.	CES-D scale score	−0.05	0.12	1.	Divorced	1.04	4.43
2	Suffering from mental disorder	1.14	2.17	2.	Widow	0.22	5.49
3.	Age	0.32	0.34	3.	Skilled worker	1.85	2.96
4.	Use of Antidepressants	−0.18	0.16	4.	CES-D scale score	0.09	0.13
5.	Langner scale score	0.32	0.10	5.	Suffering from psychosomatic illness	−0.34	−0.61
6.	Problematic drinking	2.34	3.47	6.	Use of Antidepressants	2.08	5.21
7.	Sex	4.19	4.83	7.	Had visited a docter	−5.14	−7.09
8.	Living in Athens	2.75	3.05	8.	Langner scale score	0.77	0.30
9.	Rest urban areas			9.	Problematic drinking	0.92	2.44
10.	Divorced	0.19	1.10	10.	Mentally ill family member	0.76	1.37
11.	Unskiled worker	0.55	1.14	11.	Unemployed	8.46	9.19
12.	Elementary education	3.17	3.38	12.	Living Athens	0.12	0.78
13.	Suffering from psychosomatic illness	−0.76	−0.89	13.	Sex	3.32	3.75
14.	Mentally ill family member	1.14	1.41	14.	Age	0.25	0.31
15.	Pensioner	7.78	9.00	15.	High school graduate	13.0	14.9
16.	Unskilled worker	−0.85	−0.48				
17.	High school graduate	0.85	0.48				
18.	Employment status	5.01	5.15				
	Constant	−12.02	−13.88			−5.07	−6.83
Percentage of grouped correctly classified: 77.6%				Percentage of grouped correctly classified: 86.2%			

distribution in prevalence rates of symptoms of depression (Madianos and Stefanis 1992). This can be explained by the nature of these symptoms of depression, including suicidal ideation as a core symptom, often mixed with symptoms of anxiety that are sensitive to changes caused by external stressors (Boyd and Weissman 1981). This type of non-specific psychopathologic symptoms probably reflects a demoralization process; first, as a concomitant result of unfavorable economic conditions; second, to the social disintegration and consequently related to an increase of suicidal behavior (Link and Dohrenwend 1980). This hypothesis is supported by the substantial increase in the proportion of respondents characterized as mentally impaired according to the Langner scale criteria, an instrument that incorporates many anxiety symptoms (Madianos et al. 1987a). In our case, these changes may have been caused by the economic recession of 1984 and by the subsequent atmosphere of demoralization and not by other social changes within the six year interval. Such a time interval is in itself insufficient for such changes.

Since 1981, expansionist policies lead to an economic crisis, reaching its peak in 1984; this made it necessary to take economic measures in 1985–1986 (Madianos and Stefanis 1992).

In 1984, the inflation rate reached 19%, while in 1978 it was only 10%. Unemployment rates increased from 3.1% in 1978 to 6.3% in 1984. This is the officially recorded unemployment rate for the whole country; these figures were much higher in Greater Athens. In fact, in the 1978 study, only 1.2% of the sample were unemployed, while the proportion of the unemployed respondents in the 1984 study was 4.6%, an increase of 3.4%. It is of note than unemployment is considered to be associated with the higher prevalence of suicidal behavior (Yang 1992; Platt 1984; Sainsbury et al. 1980).

The average annual consumers general index, indicating the general cost of living, was 44.7 in 1978 and increased in 1984 to 142.4 (Statistical Yearbooks of Greece 1979–1986). There was also an increase in public debt, which further inflamed the inflationary processes.

The close association between the various indicators (stressors) of economic instability and the prevalence of depressed mood and suicidal behavior has been confirmed by several studies (Catalano and Dooley 1977; Dooley et al. 1981; Bell et al. 1981).

The finding that the majority of suicidal ideators and attempters were residents in the Greater Athens area, where quality of life and economic conditions are worse than in other areas of Greece, is in line with the studies previously mentioned and with other studies which reported that rural areas have a lower frequency of psychiatric disorders, particularly depression and suicidal behavior, than urban areas (Blazer et al. 1986).

Almost 100 years earlier E. Durkheim in his classic study on suicide (1897) argued that economic instability (growth and recession) should have an impact on suicides, since economic changes negatively influence the individual's social integration into social networks, decreasing social regulation.

In our case, a more prolonged time interval for cross-sectional measurements is probably needed to reconfirm a possible association between indicators of economic instability, social desintegration and suicidal behavior in the general population of Greece.

Apart from the socioeconomic factors that are often related to suicidal behavior, another possible explanation of the increased prevalence of suicide rates is the effect of modelling in suicide epidemics. Schmidtke and Hafner (1988) investigated the suicide imitation effects (the Werther effect), after television films shown. Over extended periods after the first TV episode, the number of suicides increased among 15–29-year-old males to 175%. No suicide epidemic related to television films has ever been recorded during the 6 years between the first and the second study in Greece.

Another method of interpreting suicide trends is cohort analysis. A birth cohort effect has been reported by several investigators to be present in suicide trends (Hagnell et al. 1982; Murphy and Wetzel 1980). However, no such effect has ever been reported concerning attempted suicides.

The increase in the prevalence rates of suicidal ideation from 4.8% in 1978, a proportion very close to the one (4.3%) reported by Madianos et al. (1985a) from another field survey carried out in two Athenian boroughs in 1979, to 10.9% in 1984, along with the increase in the prevalence of depressed mood, is indicative of a remarkable proportion of the general population suffering from serious psychological distress, depressed mood, expressing feelings of self-destruction, although a lesser number of these cases attempted suicide when feeling extremely hopeless – helpless (Stengel 1980; Beck 1967). In fact, there were about ten times as many persons with suicidal ideation than the number of the suicidal attempters, a finding also reported by others (Korczak 1988; Beskow 1989).

Regarding the issue of sex ratios, a consistent finding reported by several investigators is that a higher number of females express suicidal ideation and attempt suicide in contrast to the inversed sex ratios of the persons who had committed suicide (Weissman 1974). A possible explanation is that more females tend to be depressed than males, also manifesting self-destructive symptoms (Dohrenwend et al. 1980; Gove 1972; Weissman 1974; Weissman and Klerman 1977).

With respect to our third hypothesis on the effect of sociodemographic and some independent clinical variables on the manifestation of suidical behavior, we found patterns similar to those reported by other investigators (Korczak 1988; Bronisch and Hecht 1988; Vogel and Wolfersdorf 1988; Pallis et al. 1982).

Almost all investigators underlined the contribution of depressive psychopathology to the manifestation of suicidal behavior, especially the self-destruction, the social environmental factors such as sex, marital status, employment, and other clinical variables such as problem drinking, drug use, mental illness in the family. All the above variables, supplemented by some others, were found to have strong discriminating power between suicidal and non-suicidal ideators and attempters. It should be noted that depressive disorder has also been identified as a risk factor in committed suicides. In the Lundby

longitudinal study, Hagnell et al. (1981) found during the observation period of 25 years a close association between suicide rates and the previous diagnosis of depression, indicating that depressive disorder implies a considerably increased risk of suicide.

Finally, the method of personal interview chosen in these general population nationwide surveys can be considered reliable, in view of the high response rate in both studies, the absence of missing data and the accuracy of elicited information on suicidal behavior; this reflects the true prevalence of the phenomenon in the country.

In conclusion, our findings demonstrate that there was a significant increase in the 6-year interval in the number of respondents suffering from a suicidal ideation and reporting a recent life-threatening act, probably affected by disadvantageous socioeconomic conditions. These results also confirmed our main hypotheses.

According to Stengel (1980), the causes underlying a suicide attempt are in essence the same as those of committed suicide, differing only in those cases in which the attempters intended to impress other people.

Another clinical issue is that agression directed against others is more manifest in suicidal attempts than in suicides.

Undoubtedly, suicidal behavior has many clinical implications and deserves special attention by clinicians and social policy makers.

According to Weissman (1974), recent trends in suicidal behavior in many western societies indicate that self-destruction is a major public health problem, requiring new strategies at the level of prevention based on the identification of specific risk factors. In our studies, several apparent demographic, social, economic, medical and family risk factors were almost identical to those reported by Korczak (1988).

This remarkable increase in the rates of suicidal manifestations during recent years in Greece, a country which is rapidly changing in many aspects of social institutions, necessitates development of a preventive mental health policy, especially given the fact that certain predictors are already known.

Acknowledgements. The research outlined in this paper is part of the project on psychosocial factors and health and was supported by grants from the Ministry of Health and Social Welfare and the General Secretariat of Youth in Greece. The authors are greatly indebted to Mrs. O. Zarnari for the valuable help during the project, J. Vlachonikolis, who performed the statistical analysis, and Mrs. C. Dede and Mrs. E. Ioannovich.

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