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Psychological Functioning and Psychiatric Morbidity in an Elderly Urban Population in Greece

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Summary. As part of a systematic epidemiological survey of mental disorders in two Athenian boroughs, a probability sample of 251 elderly community residents was examined by a psychiatrist. For the assessment of their mental health, symptom screening scales were used (Langner and CES-D). Cognitive functioning was also evaluated. An overall psychological functioning profile was composed from previously derived mental health levels. Clinicial diagnostic examination was based on a semi-structured schedule (PEF) supplemented by DSM-III criteria.

A higher proportion of females than males were characterised as psychologically impaired, reporting non-specific symtoms of distress. Older respondents of lower socioeconomic status experiencing stressful life events, such as living alone or having been exposed to migration in the past, exhibited a significant degree of psychopathology. Of the sample, 20.3% was diagnosed as suffering from a specific psychiatric illness. The prevalence of organic mental disorders was 5.6% and affective disorders of any type constituted nearly half of the diagnosed psychiatric "cases". The implications of this survey are of great importance for the design and the development of preventive strategies and community-based interventions.

Key words: Prevalence – Mental disorders – Organic mental disorders – Symptom screening scales – Urban area – Community Mental Health Center

Introduction

There has been a growing interest in the epidemiology of psychological disorders and specific psychiatric morbidity among elderly persons living in the community (Gunner et al. 1976; Blazer 1980; Persson 1980; Nilsson and Persson 1984; Cooper and Schwartz 1982; Kivela et al. 1986; Ben Arie et al. 1987; Copeland et al. 1987; Morgan et al. 1987; Carpiniello et al. 1989; Bowling 1990).

This development is due to the continuous increase of the elderly population in almost all Western societes and the recognition of the need for a better knowledge of the psychosocial conditions and the normal ageing processes. Community surveys are expected to contribute to the effective planning of services for the prevention and treatment of psychiatric problems among the elderly (Kay and Bergmann 1980; Henderson and Kay 1984; Shepherd 1984; WHO 1985; Murphy 1989).

Most of the epidemiological surveys mentioned above, have been carried out in Northern Europe with well-documented methodology and instrumentation and describe societies within a similar sociocultural context. In Southern Europe the number of published community surveys of elderly populations is very small (Carpiniello et al. 1989).

Greece, like other Southern European countries, has undergone sociocultural changes through migration, urbanization, and nuclear family transformation which have resulted in a weakening of family and community ties and have influenced negatively the well-being and adaptation of the elderly in Greece. (Tsaoussis 1976). On the other hand, the increase of the elderly population at the same time changed the demographic structure (Siampos 1980; NSS 1988). Persons over 65 years old now constitute nearly 12% of the total population (NSS 1988). This increase is caused by the extension of life expectancy in males (71 years) and females (75 years) and the declining birth rate. The growing number of elderly individuals during the past decades has resulted in various medical, psychosocial and social problems regarding insurance, housing, support system organization and mental health care. Epidemiological studies of the prevalence of psychological disorders and related psychosocial issues among the elderly population are therefore of great importance.

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In this paper, we present the first community survey of mental health in the elderly in Greece. It was carried out in two neighbouring Athenian boroughs with a probability sample of community residents. The study is part of a systematic epidemiological assessment of mental health needs (treated and untreated morbidity) of two boroughs served by a community mental health center (Madianos et al. 1987).

The study was designed to explore mainly the psychological and cognitive functioning and the specific psychiatric illness among the elderly sample. Its purpose was, in particular, to answer the following questions:

Are there any differences in cognitive impairment and non-specific psychopathology between males and females?

What are the factors that influence psychopathologic symptom formation?

Is there any association between stressful life events or difficulties and psychological functioning?

Are there any differences in the prevalence of specific psychiatric disorders between sexes and age groups?

Material and Methods

A total of 307 eligible subjects aged >65 years were randomly selected by means of a two-stage systematic sampling of 1600 households representing 15% of the population of two boroughs of Greater Athens. From a random number of blocks (first stage) a number of households were selected at random (second stage). Any elderly person living in a nursing home was excluded. The boroughs cover an area of 8.4 km^2 and have a total population of 86.000, which consists mostly in a working- and middle-class population.

A total of 9.904 inhabitants, 40.3% males and 59.7% females, were over 65 years old. The area's age dependency index is defined by the ratio of the economically adult population on whom children and/or elderly persons are dependent. It was 45% in Greater Athens and 48.6% in the area we investigated. The final sample included 251 respondents, the others having died in the meantime (8.8%) or refusing to participate (7.1%). No correlation was found between refusals and geographic location of households.

The participation rate (82%) is similar to that reported by Persson (1980) and Copeland et al. (1987) and may be considered very satisfactory.

Table 1 presents the sociodemographic characteristics of the sample.

The mean age of the sample was of 74.0, SD 6.6 years. The rates of 37.8% males and 63.2% females corresponded to those of the local population. The majority of the sample were widowed or married, of lower educational levels and of middle-lower or lower socioeconomic status.

Table 1. Sociodemographic characteristics of the sample (n: 251)

Sex	n	%
Males	95	37.8
Females	156	63.2
Age (mean)		
Males	74.6 ± 6.3 years	
Females	73.6 ± 6.4 years	
Total	74.0 ± 6.6 years	
Marital status	n	%
1. Single	26	10.4
2. Married	100	39.8
3. Divorced	11	4.4
4. Widowed	112	44.6
5. Cohabitee	2	0.8
Education	n	%
1. Illiterate/some elementary school	108	43.1
2. Elementary school/some high school	97	38.6
3. High school graduates	38	15.1
4. University graduates	8	3.2
Socioeconomic level[a]	n	%
1. Upper	8	3.3
2. Middle	46	18.2
3. Middle/lower	133	53.2
4. Lower	64	25.3

[a] Occupation × education

Measures

Respondents were interviewed at home by a psychiatrist. No other members of the households attended the interviews. The average interview lasted 90 min. The questionnaire consisted of three parts. In the first part, all basic sociodemographic data and the respondents' medical history were assessed. In the second part, their mental health status was assessed by two symptom screening scales: the 22-Item Scale (Langner 1962) and the CES-D scale of the Center for Epidemiological Studies (USA) (Radloff 1977). Both instruments were standardized for Greece and found reliable and valid in large cross-sectional studies (Madianos and Zarnari 1988; Madianos et al. 1985). Additional information on stressful life events or difficulties during the last 6 months before the interview, on the use of psychotropic medication, and on previous help-seeking was also obtained. Stressful life events were recorded in a list, previously used in a nation-wide study (Madianos and Zarnari 1988).

In the last part of the questionnaire, each subject was evaluated for possible cognitive impairment and disability of organic etiology by both the Short Portable Mental Status Questionnaire (SPMSQ) and the Stockton Geriatric Scale (Pfeiffer 1975; Pattie and Gilleard 1975). The SPMSQ consists of 10 questions on cognitive functioning. Eight to ten errors constitute serve cognitive impairment. The Stockton Geriatric Scale consists of 33 items with a score ranging from 0 to 66. A cut-off score of <20 characterized a subject as disabled by an organic mental syndrome.

Psychiatric status was examined by a semi-structured and comprehensive psychiatric interview, the Psychiatric Evaluation Form (PEF) (Endicott and Spitzer 1972). PEF consists of 19 subscales describing dimensions of psychopathology and screening symptoms which were then used as diagnostic criteria according to DSM-III (APA 1980). PEF measures present psychopathology and diagnoses result in point prevalence. Definitions of these subscales are provided by the authors.

This instrument was translated and validated in previous psychiatric epidemiological surveys (Madianos 1989).

For the research design requirements, a new variable was constructed called "Mental health status", based on specific criteria and corresponding to an overall psychological functioning. The respondents' mental health status was characterized as "well" if their scoring levels ranged between 0–3 and 0–5 on the Langner and CES-D scales, respectively, and if they were given a rating between 1–2 on the PEF overall-severity-off-illness subscale. A cut-off of >7 and a score of >20 on the Langner and CES-D scales,

Table 2. Correlation coefficient matrix (Pearson-R) between the five tests used and the mental health status classification (n: 251)

	1.	2.	3.	4.	5.
1. Mental health status	1.00				
2. CES-D scale	0.55*	1.00			
3. Langner scale	0.79*	0.80*	1.00		
4. Stockton geriatric	0.56*	0.55*	0.75*	1.00	
5. Pleiffer	0.28*	0.32*	0.42*	0.53*	1.00
6. PEF 1	0.93*	0.78*	0.59*	0.67*	0.39*

1 Overall severity of disorder
* $P < 0.001$

respecitively, as well as a rating between 4 and 6 on the PEF overall-severity-of-illness subscale characterized a respondent as exhibiting severe impairment of psychological functioning. "Mental health status" was validated against the Langner scale (with a cut-off at score >7) providing satisfactory sensitivity (78%) and specificity (83%) rates. Validation against the CES-D scale provided almost identical results. An inter-rater reliability study on the mental health classification by two independent psychiatric raters was carried out. Each respondent's mental status was rated on a three-point scale ranging from "well", to "moderate impairment" and "severe impairment" according to the criteria previously described. The degree of agreement between the two rates as estimated by Cohen's K-coefficient was high (K: 0.80, Z: 10.9 $P < 0.0001$) (Cohen 1960).

The correlation coefficient matrix between the five scales and "mental health status" is shown in Table 2.

All correlation coefficients are statistically significant. Reliability and validity studie of the Langner and CES-D scales, SPMSQ, the Stockton Geriatric Scale and DSM-III diagnoses were conducted. The Langner scale was validated against DSM-III diagnosis ("cases" versus "non-cases"). A cut-off score of >7 resulted in a sensitivity of 77% and a specificity of 90%. The CES-D scale was validated against a diagnosis of depression (depressed versus non-depressed). A cut-off score of >20 resulted in a sensitivity of 85.7% and specificity of 84.6%.

A test-retest reliability study in a subsample of respondents led to statistically significant product moment coefficients for the Langner scale (0.88), CES-D (0.76), SMSQ (0.59) and the Stockton Geratric Scale (0.61).

The internal consistency of SPMSQ and the Stockton Geriatric Scale resulted in a Cronbach's a coefficient of 0.78 and 0.83, respectively (Nunally 1967). Finally, an inter-rater reliability study on DSM-III diagnoses was carried out by a second psychiatrist who reviewed the protocols. The degree of agreement between the two psychiatrists on four diagnositc groups was 0.70 (Cohen 1960).

Statistical methods. For score on scales Student's t-test was used to test the significance of the differences between means.

Chi square statistic was used to estimate the significance of differences in the distribution of categorical variables. To examine the effects of sociodemographic variables on mental health status as a numerical variable (range from 1 to 3), we applied a five-way analysis of variance (ANOVA).

The statistical analysis was performed by the use of the statistical package for social sciences X version (SPSS-X 1983).

Results

The average Langner CES-D scales and SPMSQ scores were found to be higher in female than male respondents, while no difference on the average Stockton Geriatric scale between the sexes was noticed (Table 3).

The global mental health status of repondents based upon the Langner CES-D and the PEF overall-severity-illness scoring levels is shown in Table 4. A total of 17.6% of the sample appeared as severely impaired.

The prevalence of organic disability (20 + score on the Stockton Geriatric Scale) was 35.7 and 64.3 for males and females respectively (Table 5). Cognitive impairment rates (scores of 8–10 in SPMSQ) were 40% for males and 60% for females.

Table 3. Average scores of Langner, CES-D SPMSQ and SGS scales by sex (n: 251)

Scales	Males n: 95	Females n: 156	t DF 249	P
Langner	2.82 ± 3.25	4.27 ± 4.03	3.15	<0.01
CES-D	9.01 ± 10.06	12.74 ± 10.79	2.80	<0.01
SPMSQ (cognitive impairment)	10.56 ± 1.81	11.72 ± 2.34	4.46	<0.001
Stockton geriatric (organic disability)	6.10 ± 8.90	5.05 ± 6.27	1.01	NS

SPMSQ = Short portable mental status questionnaire for cognitive impairment, SGS = Stockton geriatric scales

Table 4. Distribution of respondents according to Langner and CES-D scales levels, PEF overall severity of illness and mental health status categories (n: 251)

Scales	Criteria	n	%	Criteria	n	%	Criteria	n	%
Langner	0–3[a]	153	61.9	4–6	44	17.8	≥7	50	19.9
CES-D	0–5[b]	155	61.7	6–19	47	18.7	≥20	49	19.5
PEF	1–2[c]	157	62.5	3	48	19.2	4–6	46	18.3
Mental health status	Well	161	64.1	moderate impairment	46	18.3	severe impairment	44	17.6

[a] Number of reported pathognomonic symptoms
[b] Scoring levels
[c] Overall severity of illness subscale levels

Table 5. Prevalence of organic disability (Stockton geriatric scale) and cognitive impairment levels (SPMSQ) by sex (n: 251)

Scales	Criteria	Males		Females		Total			
		n	%	*n*	%	*n*	%		
Stockton geriatric scale	≥21[a] (no organicity)	90	38.0	147	62.0	237	100.0	χ^2: 0.02 NS	Yates correction
	≤20 (organicity)	5	35.7	9	64.3	14	100.0		
Prevalence		5.26%		5.76%					
Short portable mental status questionnaire (cognitive impairment)	8–10[b] (severe impairment)	4	40.0	6	60.0	10	100.0	χ^2: 0.30 NS	
Prevalence		4.2%		3.8%					
	5–7 (moderate impairment)	1	25.0	3	75.0	4	100.0		
	0–4 (well)	90	38.0	147	62.0	237	100.0		

[a] Total score
[b] Number of mistakes

Table 6. Mental health status by sex (n: 251)

Mental health status	Males		Females		Total	
	n	%	*n*	%	*n*	%
Well	67	70.5	94	60.2	161	64.1
Moderate impairment	10	10.5	36	23.1	46	18.1
Severe impairment	18	19.1	26	16.7	44	17.6
Total	95	100.0	156	100.0	251	100.0

$\chi^2 = 6.22$, $df = 2$, $P < 0.05$

Table 7. Mental health status by marital status, education, mode of living and migratory status (n: 251)

Variables	Mental health status			χ^2	$P <$	
	Well (%)	Moderate impairment (%)	Severe impairment (%)			
Education						
1. Illiterate/some elementary school	55.6	23.1	21.3	9.7	NS	$df = 6$
2. Elementary school/some high school	67.0	17.5	15.5			
3. High school graduates	81.6	5.3	25.0			
4. University graduates	21.3	15.5	13.2			
Marital status						
1. Single	57.7	11.5	30.8	16.99	<0.05	$df = 8$
2. Married	74.0	10.0	16.0			
3. Widowed	58.0	26.8	15.2			
4. Divorced	45.4	27.3	24.3			
5. Cohabitees	100.0	–	–			
Mode of living						
1. Living alone	52.4	24.4	23.2	7.24	<0.05	$df = 2$
2. Living with family	69.8	15.4	14.8			
Migratory status						
1. Non-migrants	75.0	11.9	13.1	6.43	<0.05	$df = 2$
2. Migrants	58.7	21.5	19.8			

Table 8. Stressful life event(s) and mental health status (*n*: 251)

Stressful life event(s)/ difficulties	Mental health status						Total
	Well		Moderate impairment		Severe impairment		
	n	%	*n*	%	*n*	%	
Present	69	42.8	42	91.3	33	82.5	144
Absent	92	52.7	4	8.8	7	17.5	103
Total	161	100.0	46	100.0	40	100.0	247

$\chi^2 = 43.6$, $df = 2$, $P < 0.0001$

The overall psychological functioning as represented by the mental health status levels is shown in Table 6.

A higher proportion (39.8%) of female than male respondents appeared moderately or severely impaired. In the severe impairment category, however, almost equal rates of males and females were identified.

No statistically significant association was found between educational levels and mental health categories (Table 7). Single, widowed or divorced respondents showed higher rates of mental health impairment than their married counterparts.

Living alone or being a migrant within Greece in the past or repatriated from Asia Minor was also associated with mental health impairment.

Of our subjects, 57.3% reported a stressful life event during the last 6 months. A serious physical illness was mentioned most often; then, with declining frequency, financial problems (19.3%), abandonment by the family (16.3%), and intra-familial problems (13.7%). The loss of a spouse during the past 6 months was reported by 7.5% of the sample.

The experience of stressful life events/difficulties was strongly associated with mental health status (Table 8). Of 144 persons who had recently experienced one or more stressful life events, 75 (52%) were characterized as psychologically impaired.

The analysis of variance (ANOVA) revealed that age, socioeconomic status (defined by the educational and occupational levels), marital status and sex affected the mental health status levels (Table 9).

The diagnostic distribution of respondents by the application of DSM-III criteria is shown in Table 10.

A total 20.3% of the sample was diagnosed a suffering from a specific psychiatric disorder. Diagnoses were almost equally distributed among the sexes. Affective and anxiety disorders constitute the majority (10.7%) of the diagnositc categories, with 2.0% of the sample suffering from major depression. Organic mental disorders constitute 5.6% of the total diagnoses.

A higher prevalence of total psychiatric disorder was found among the very old (30.7%) than among the old respondents (13.4%) (Table 11).

However, the distribution of the diagnostic entities among the two groups of respondents failed to be statistically significant.

Finally, a total of 77 repsondents (30.6%) reported current use of psychotropic medication but only 22.0% were under psychiatric care. Of these respondents, 44.2% were found to be psychologically "well".

Table 9. Analysis of variance: mental health status and socioeconomic status × marital status × sex × education (*n*: 251)

Source	*F*	*P*
Covariance	7.512	<0.007
Age	7.512	<0.007
Main effects[a]	2.415	<0.008
Socioeconomic status	2.524	<0.059
Marital status	2.741	<0.030
Sex	2.741	<0.030
Education	0.355	NS

[a] Second-order interactions were not statistically significant

Table 10. Diagnostic distribution of respondents by sex (*n*: 251)

Diagnostic categories	DSM-III	Males			Females			Total		
		n	%		*n*	%		*n*	%	
Organic mental disorders: dementia	290.30	5	5.2		9	5.7		14	5.6	
Schizophrenic disorders	295.000	1	1.0		1	0.6		2	0.8	
Paranoid disorders	296.000	2	2.1		1	0.6		3	1.2	
Major depressive disorders	296.000	2	2.1		3	1.9		5	2.0	
Dysthymic disorders	300.40	5	5.2	9.4	9	5.7	11.4	14	5.6	10.7
Anxiety disorders	300.000	2	2.1		6	3.8		8	3.1	
Adjustment disorders with depressed mood	309.000	1	1.0		4	2.5		5	2.0	
All diagnoses		18	18.9		33	21.1		51	20.3	
Base for %		95			156			251		

$\chi^2 = 2.501$ $df = 6$, NS

Table 11. Diagnostic distribution of old and very old respondents (n: 251)

Diagnostic categories	DSM-III	Old (65–74)		Very old (>75)		Total	
		n	%	n	%	n	%
Organic mental disorder: dementia	290.30	5	3.4	9	18.3	14	5.6
Schizophrenic disorders	295.00	–		2	4.0	2	0.8
Paranoid disorders	297.00	1	0.7	2	2.0	3	1.2
Major affective disorders	296.00	1	0.6	4	4.0	5	2.0
Dysthymic disorder	300.40	4	2.7	10	10.0	14	5.6
Anxiety disorder	300.00	5	3.4	3	3.0	8	3.1
Adjustment disorder with depressed mood	309.00	4	2.7	1	0.9	5	2.0
All diagnoses		20	13.4	31	30.7	51	20.3
Base for %		150		101		251	

$\chi^2 = 9.41$, $df = 6$, NS

Discussion

Today, psychiatric morbidity in field surveys is defined either by levels of clinical severity or psychological impairment or by a diagnostic classification procedure, each method providing certain advantages (Cooper and Schwartz 1982; Ben Arie et al. 1987).

In our survey, we tried to combine both research approaches, measuring the dimensions of psychological impairment and diagnosing the identified psychiatric "cases".

The overall psychological impairment among the elderly community residents, as defined by selected cut-off points on symptom screening scales, which record self-reported on-specific symptoms of distress (anxiety, depressive and psychophysiological symptoms) reflects demoralization and feelings of hopelessness-helpessness. They are common phenomena among vulnerable groups such as the elderly in changing societies (Link and Dohrenwend 1980).

The total point-prevalence of psychological impairment in our sample was 17.6%, which is higher than the 14% found in the adult sample (n: 1574) drawn from the same boroughs and previously examined (Madianos et al. 1987). The former rate is within the range of prevalence rates of severe impairment reported by other investigators based on symptom screening scales (Gurland and Gross 1982; Henderson and Kay 1984; Copeland et al. 1987), whereas one study reported a much higher prevalence rate (27.0%) of probable morbidity using the GHQ (Bowling 1990).

The sex differences found among the psychologically impaired elderly individuals are consistent with those of the majority of cross-sectional surveys both of adult and elderly population samples (Gove and Tudor, 1973).

The social origin of the demoralization symptoms derived psychological impairment, was confirmed by the close association between severe psychological impairment and independent sociodemographic variables (socioeconomic and material status) and disadvantaged social conditions (living alone or being a migrant). These findings agree quite well with the ones reported from other cross-sectional studies with adult and elderly samples (Persson 1980; Murphy 1982; Ferraro et al. 1984; Madianos 1980; Madianos et al. 1985; Carpiniello et al. 1989).

Particularly those elderly who had been exposed to migration (within Greece or repatriation) in their fifties or sixties exhibited a higher degree of psychological impairment compared to non-migrants. Another important characteristic of our sample was that 32.7% of our respondents were living alone and that 47.6% of this group was characterized as psychologically impaired. In a previous sociological survey by the National Center for Social Research (NCSR) in the early 1970s among an elderly sample of 550 Athenians on life styles, well-being and social adaptation, only 11.5% of them were living in single-person households (Pitsiou 1986) and only 10.7% of the sample were not satisfied with life.

The crucial issue is the changing character of modern Greek society and its effect on the psychosocial adaptation of the elderly in a less supportive community. It seems that family ties in Athens are weakening and the likelihood of the elderly to live alone is increasing, this in contrast to the extended family type still existing in some rural areas in Greece. In the study by the NCSR mentioned above almost identical independent variables (income, living with others, loneliness, lack of a confidant) explained 45% of the variance of the dependent variable (social adaptation).

We then investigated the possible association between the experience of stressful life events and psychological impairment. In fact more than half of the sample (57.3%) reported current experiences of stressful life situations including "poor health", "financial problems", "intra-family problems" and "loss of a spouse". Those persons who had recently experienced one or more stressfull life events were significantly more often psychologically impaired, a finding reported in a number of studies (Murphy 1982; Wilkinson et al. 1985). There is no doubt that the elderly population constitutes a socially disadvantages group exposed to various stressful life situations and social difficulties. This hypothesis was also supported by the finding that only 33% of an adult sample drawn from the same area of our study had experienced recent stressful life events. The latter were mostly related to socioeconomic strains.

Our second methodological approach was a clinical diagnostic procedure that provides the advantage of

screening for specific forms of psychopathological entities. Each of them requires special attention in items of therapeutic intervention strategies.

The total frequency of psychiatric morbidity found in our sample (20.3%) is similar to prevalence rates reported by other investigators (Persson 1980; Cooper and Schwartz 1982; Nilsson and Persson 1984; Copeland et al. 1987). Sex differences by diagnoses were not found.

More relevant is a rather recent study by Copeland et al. (1987) of a sample of 1070 elderly persons living in an urban area, in which the total prevalence of diagnosed psychiatric cases was 19.3%, the organic symptoms constituting 5.2% of the total of diagnostic categories.

In our study the prevalence of organic mental disorders was 5.5%. All respondents diagnosed as "organic" were also characterized as cognitively impaired, using SPMSQ scoring levels and the Stockton Geriatric Scale cut-off points, which served as validity criteria for the diagnosis.

All categories of affective and anxiety disorders constituted half of the total diagnoses (10.7%) which is a consistent finding of almost all field surveys with elderly samples (Blazer and Williams 1980; Gurland et al. 1983; Henderson and Kay 1984; Copeland et al. 1987; Morgan et al. 1987). However, in some other studies higher prevalence rates of affective disorders have been reported (Cooper and Schwartz 1982; Ben Arie et al. 1987; Carpiniello et al. 1989). The finding of a higher prevalence of total psychiatric illness and of organic mental disorders (30%) among the very old respondents (> 75 years) than among the old ones (65–74 years) (13.7%) has been supported by Nilsson and Persson (1984), Morgan et al. (1987), and Bowling (1990).

Diagnoses of alcohol or drug dependence did not occur in our Greek sample. This is in contrast to findings from surveys carried out in Northern Europe (Nilsson and Persson 1984).

The difference between the overall psychological impairment rate (26.3%), both mild and severe, and the total prevalence of psychiatric disorder (20.3%) can be explained by the fact that psychological functioning (mental health status) was based only on a quantitative measurement of symptoms of distress, which reflects a demoralization process and not the true prevalence of mental illnes (Link and Dohrenwend 1980). The same difference was reported by Madianos et al. (1987) in the previously mentioned field survey with an adult sample drawn from the same area of our study.

In conclusion: ageing is a multi-dimensional process that involves social, economic, psychological, psychiatric, and biological factors and there is no doubt that psychological functioning depends upon their interdependency. The point-prevalence rate of overall moderate and severe psychological impairment projected on the actual elderly population of Greece could mean that hundreds of elderly people are at risk of developing a specific psychiatric disorder. It has also clinical significance in terms of help-seeking.

Many of the data patterns presented here are in line with those reported by other investigators in urban or metropolitan areas. This coincidence is probably accounted for by the same socioeconomic and cultural phenomena taking place in Athens and other metropolitan areas.

The implications of this study are of great importance for the development of specific preventive strategies and psychogeriatric interventions for the local elderly population by our Community Mental Health Center.

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