The Interaction of Sociocultural Factors and Depression in the Elderly: Evaluating Suicidal Ideation and Suicidal Intention

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Suicide and suicide attempts are more frequent in the elderly than in other age groups. The main risk factor is the presence of a depressive disorder that often goes unnoticed or is insufficiently treated. In fact, there are no clear symptoms that can unequivocally give notice of suicidal intent. Suicidal intent is characterized by restlessness, guilt, expressions of hopelessness, feelings of loneliness, frequent insomnia, weight loss and physical or hypochondriac complaints. Suicide in the elderly is often an impulsive act and thus it is difficult to predict when it will occur. Often certain actions or comments of the elderly only have a real dimension when the act has been carried out. The quality of the environment of the individual's circumstances constitutes the best way to prevent what is so hard to predict.

Among numerous factors that may be associated with suicide, we can highlight the following: a family history of suicidal behavior; loneliness and social isolation; dependencies (illicit drugs, drugs and alcohol); terminal illness or chronic pain; and social problems (unemployment, hazardous occupations or psychological stress). The resolution of such problems involves the development of strategies that promote self-esteem, and self-concept.

MATERIAL AND METHODS

The main objective of this study was to assess the interaction of sociocultural factors and depression in suicidal ideation and intent in the elderly.

The sample was collected in Alentejo in 372 elderly individuals, with similar numbers of men and women. The author is running an anonymous survey for people more than 65-years old among the Alentejo residents who voluntarily accept respond to questions about behaviors and feelings, including attempts at suicide. Survey participants do not need to give many details about their suicidal thoughts and behaviors, but only respond to 11 true/false questions on the ETIIS scale:

1 - I feel that I want to disappear from here.
2 - If I can, I would always be asleep; so as not to think about anything.
3 - To be alive is good.
4 - I'm tired of life.
5 - Sometimes I have suicidal ideas.
6 - I think that is better to be dead.
7 - Suicide seems to me a possible solution to end the suffering.
8 - As soon as the opportunity arises, I will tell someone my intent to commit suicide.
9 - I talk often about suicide.
10 - I have plans for my death.
11 - I have clear plans of suicide; I'm just waiting for the occasion.

All items have one point with the exception of number 3 which has zero points. The survey is anonymous and only requires tacit authorization.

The sample largely consists of men (54%) of rural (86%) and illiterate (48%) backgrounds. With regard to religion, 85% of the elderly are Catholics, but only 29% of this group attends church, which is approximately the same as the number who claim to be atheists (24%). As for hobbies most refer to not having them, or when they do they describe very solitary activities like "sitting in the doorway", "thinking about life", "looking at the horizon and see[ing] people and cars passing. Half of the sample has the habit of drinking and of these 14% have frequent alcohol consumption. Most live in nuclear families (spouses or partners) or lonely (single-person family), and 49% rate their family relationships as good. As for suicide, the majority

of respondents did not refer to previous suicide attempts, although 8% have already referred to previous attempts. A history of suicidal behavior among family or friends was reported by 12% and 18% respectively. Suicidal behavior in the local community was reported by more than 23% of our sample. Mental disorders were diagnosed in 19% of the elderly. Finally, the question about having a vision about suicide revealed that 69% considered it a deadly sin, while 25% said that is the lesser of two evils (see Table 1).

Table 1 - General characteristics (n=372).

elderly		count	percent
Gender	woman	171	46
	Man	201	54
Residence	Beja	200	53.8
	Portalegre	66	17.7
	Évora	106	28.5
Age	65-74 (young old)	179	48.1
	75-84 (old)	128	34.4
	>= 85 (old-old)	65	17.5
State	married	164	44.1
	widow	126	33.9
	single	76	20.4
	divorced	6	1.6
Social environmental	urban	52	14
	Rural	320	86
School	illiterate	178	47.8
	literate	69	18.5
	1st Cycle Basic Education	111	29.8
	2nd Cycle Basic Education	6	1.6
	3rd Cycle Basic Education	4	1.1
	higher education	4	1.1
Religion	none/ atheist	92	24.7
	practicing Catholic	108	29
	Catholic Non practicing	166	44.6
	another Christian faith	6	1.6

Hobbies	none	149	40.1
	individual / solitary hobbies	114	30.6
	collective hobby	109	29.3
Alcoholic habits	None	185	49.7
	casual	78	21
	at meals	58	15.6
	meals and between them	51	13.7
Familiar typology	unipersonal + household	38	10.,2
	unipersonal	144	38.7
	nuclear	164	44.1
	enlarged	22	5.9
Without information		4	1.1
Familiar relationship	Poor	52	14
	reasonable	135	36.3
	Good	181	48.7
Without information		4	1.1
Recent lost	No	261	70.2
	Yes	111	29.8
Polymedication	No	247	66.4
	Yes	125	33.6
Previous suicide attempts	No	341	91.7
	Yes	31	8.3
Familiar's history of suicide	No	326	87.6
	Yes	46	12.4
Friend's suicide behaviors	No	306	82.3
	Yes	66	17.7
local's suicide behaviors	No	285	76.6
	Yes	87	23.4
Pathology diagnosed	No	300	80.6
	Yes	72	19.4
Vision of suicide	noble resolution to a personal dilemma	21	5.6
	is the lesser of two evils	91	24.5
	deadly sin	256	68.8
Without information		4	1.1

We conceptualized a hypothetical model based on the classic epidemiological triad of host, agent, and environmental aspects that explain the chain of negative reactions that lead to suicide. Thus, the dimensions that we considered intrinsic to the host were depression and loneliness, which have a positive linear relationship. The environmental dimensions are satisfaction with social support and quality of life, which also correlate positively. The dimensions that partly constitute the suicidal agent are sociocultural risk, and suicidal ideation and intent, which we expected to be positively correlated with each other. We hypothesised that at the intersection of these dimensions there is a negative relationship between environmental and host factors as low values of satisfaction with support and the quality of life correspond to high levels of loneliness and depression and, consequently, high suicide risk. Likewise there is a positive relationship between the host and the agent, which means that high levels of depression and loneliness represent a high suicide risk.

To test the model given the expected illiteracy of subjects in the study, we used the questionnaire assessing sociocultural risk (QASC) created by Pocinho (2007), the Portuguese version of the geriatric depression scale (GDS) from Pocinho, Farate, Dias, Lee, and Yesavage (Pocinho, Farate, Dias, Lee, & Yesavage, 2009), the suicidal intent and suicidal ideation discussion (ETIIS) from Pocinho (2007), the Portuguese version of the loneliness scale (UCLA) from Pocinho, Farate, and Dias (Pocinho, Farate, & Dias, 2010), the social support scale (SSQ) from Pinheiro and Ferreira (Pinheiro & Ferreira, 2002), and the assessment of quality of life (ETAQV) from Pocinho (2007).

The data collected were entered and processed through SPSS software.

We wanted to assess the interaction of sociocultural factors and depression in suicidal ideation and intent in the elderly. Necessarily, we had to establish a method of data collection that would allow us a broad view of the issues that may be implicated in those attitudes and behaviours (economic issues, level of satisfaction with life and health, perceived social support, sad moods, mental and physical failures, sickness, loneliness, etc.). For this purpose we used a battery of tests, which, after validation and verification, was composed of a total of 119 questions (QASC-19, GDS-27, ETAQV-34, ETIIS-11, UCLA-16 SSQ6-12) that assessed both objective and subjective data.

Regarding the scales used, it should be noted that the ETAQV-34 measures four dimensions involved in quality of life: life satisfaction (SV); perceived health (SP); perceived economic situation (SEP); and the overall quality of life (ETAQV) that re-

sults from the sum of the previous three subscales. Likewise, the 11-question ETIIS measuring suicidal intent (INS), suicidal ideation (IDS), and the suicidal intention and/or ideation (ETIIS) results from the sum of the INS and IDS. The SSQ-6 measures the perceived availability of support (SSQN with six items) or the quality or satisfaction with the perceived availability of that support (SSQS with another six items). The other scales have been used as one-dimensional structures.

To obtain valid, consistent and robust results, we undertook a pilot study with 660 individuals to construct and adapt the measurement instruments. For the development of the ETTIS, Pocinho (2007) used two techniques. Similarly, in this study, we adopted the most commonly used techniques of construction and validation of measures in health: clinimetrics – in which the first pool of items is the result of the judgment of patients, doctors and other health professionals about the clinical phenomena in study – and psychometrics, a scale reduction based on statistical techniques.

RESULTS

Most of the sample respondents claim to be Roman Catholics, have individual/solitary hobbies (such as watching television, listening to radio, strolling alone in gardens, being seated in public squares to see people and cars, etc.), do not drink frequently, live in nuclear families (with spouses or partners), and rank relationships (mostly family) as reasonably poor. The sample respondents were mostly drawn from a rural and uneducated population.

Most of the elderly were Catholic (76%), did not have hobbies and, if they did, they engaged in very solitary pursuits such as sitting in the doorway to "think about life," looking at the horizon and seeing people and speeding cars when they pass; 50% of the respondents said they had a drinking habit and 14% consumed alcohol frequently.

Most of the elderly made no mention of previous suicide attempts (ST); however, 8% had attempted it. Others (12%) reported previous suicide attempts in their family, and 18% reported previous suicidal behaviour in their friend's antecedents.

In our hypothetical explanatory model of suicide, we considered that the intent and/or suicidal ideation (ETIIS) has a positive linear relationship with depression and with loneliness and these were the dimensions that intrinsic to the host. Here,

environmental dimensions are defined as the satisfaction with social support and quality of life that relate to ETIIS, so that the higher the quality of life the lower the suicidal intention and/or ideation, and the more satisfied participants are with (SSQ-S6) the less social support there is for suicidal intention and/or ideation. As for the dimensions that constitute the suicidal agent, we considered sociocultural risk and suicidal ideation and intent, which positively correlate with each other. At the intersection of these dimensions, we have found that there is a negative relationship between the host and environmental factors, i.e. lower values of satisfaction with support and quality of life correspond to high levels of loneliness and depression and, therefore, high risk of suicidal behaviour. Similarly, there is a positive relationship between host size and agent, which means that high levels of depression and loneliness could represent an equally high suicide risk.

Table 2 - Correlation between suicide and loneliness, depression, social support and suicidal risk

		ETAQV	UCLA	GDS	ETIIS	SSQ-N6	SSQ-S6
UCLA	r	-0,672(**)					
	p	0,000					
	n	372	UCLA				
GDS	r	-0,528(**)	0,484(**)				
	p	0,000	0,000				
	n	372	372	GDS			
ETIIS	r	-0,625(**)	0,558(**)	0,694(**)			
	p	0,000	0,000	0,000			
	n	372	372	372	ETIIS		
SSQ-N6	r	0,356(**)	-0,420(**)	-0,264(**)	-0,283(**)		
	p	0,000	0,000	0,000	0,000		
	n	344	344	344	344	SSQ-N6	
SSQ-S6	r	0,528(**)	-0,589(**)	-0,415(**)	-0,548(**)	0,545(**)	
	p	0,000	0,000	0,000	0,000	0,000	
	n	360	360	360	360	340	SSQ-S6
IRSI	r	-0,566(**)	0,444(**)	0,342(**)	0,424(**)	-0,296(**)	-0,440(**)
	p	0,000	0,000	0,000	0,000	0,000	0,000
	n	372	372	372	372	344	360

** p< 0.01 (2 tailed)

The average result of the scales can be found in the Table 3.

Table 3 - Standard values

	Sociocultural risk (IRSI)	loneliness (UCLA)	suicidal intention and/or ideation (ETIIS)	suicidal ideation (IDS)	suicidal intention (INS)	Depression (GDS)	intensity of support (SSQ-N6)	satisfaction with Support (SSQ-S6)
Mean ($\bar{\chi}$)	12	35	1,69	1,32	0,37	10	1,74	4,44
Std deviation (S)	2	10	2,49	1,88	0,86	7	1,47	1,55
Median	12	34	0,50	0,00	0,00	10	1,50	5,00
Mode	11	32	0,00	0,00	0,00	5	0,00	5,00
Max	17	64	10,00	6,00	4,00	23	9,00	6,00
Mín	8	16	0,00	0,00	0,00	0	0,00	1,00
absence	279 (75%)	151 (41%)	300 (81%)	290 (78%)	356 (96%)	225 (60%)		
presence	93 (25%)	221 (59%)	72 (19%)	82 (22%)	16 (4%)	147 (40%)		

Loneliness and depression are the most relevant problem situations for the elderly population overall, with a prevalence of 39% and 36%, respectively. Half of the elderly respondents (50%) believed that they had a poor or very poor quality of life, while 23% of the control group considered it good or very good. Seemingly, health and satisfaction with life are the aspects that are less pleasing to respondents, as it is with respect to these two points that individuals exhibit lower levels to what we define as a reasonable quality of life, with rates of 19% and 16%, respectively.

Also found in this group was a relevant statistical relationship between suicide and depression, sociodemographic risk, loneliness and quality of life..

We found that the average values of the GDS for the diagnosis of depression are higher when two conditions are present: the elderly person is 75 years or older, and, at the same time, feels that a good family relationship is lacking in their life. We noticed also that there is a significant increase in the mean values of the GDS in cases in which the elderly person is illiterate, there is high level of prescribed medication, and the person has poor family relationships.

However, the variables that are more associated with depression in the elderly population in general are quality of life (ETAQV) and loneliness (UCLA). Indeed, older people who perceive their quality of life as very poor (= 87) have, on average, 20 of the 27 symptoms of depression. Given that the cut-off of GDS is 11 symptoms (Pocinho, Farate, Dias, Lee, & Yesavage, 2009), and older people have a mean of 20, this it is important to reflect on this relationship. Similarly, though with a lesser apparent severity, elderly people presenting 17 of the 27 symptoms of depression relate accumulated feelings of loneliness and poor quality of life (Pocinho et al., 2009). The justification for such high statistical relationship, and the rates of depression identified, can be attributed to the sense of loss associated with objectal loss of status and powers of traditional leadership. In fact, given the description of the rural elderly population studied, this event may have them emptied the Self, leading to major difficulties of introjection and identification of a predominantly depressive nature.

Relative to the average values of loneliness in the elderly population in general, these feelings of loneliness were significantly related to quality of life, family typology, depression, polypharmacy and the quality of social support; the values for loneliness increased from 31 to 44 with the degradation of quality of life (ETAQV). Similarly, older people living alone (single-family type) and having a poor quality of life also reached average levels of loneliness of 41. Given that the cut-off is 32, the average values presented should be alarming. In fact the gap between the past and the current image, the climate, abandonment of the land and the overall decline in the region, has limited future horizons for seniors. It will likely be a combination of all these aspects that explains these values in this group of elderly people.

The sociocultural risk of suicide (25%), loneliness (59%), suicidal intention and/or ideation (19%), and depression (49%) are the most relevant problem situations in the study population.

We also found that 69% of the elderly consider that they have a poor or very poor quality of life. Only 16% considered it as good (versus 23% of controls). Furthermore, 17% of the elderly referred to a very precarious economic situation, 25% indicated a very deficient state of health and 30% were dissatisfied with life?.

The suicidal intention/ideation variable was dependent on the economic situation, perceived health status and satisfaction with life. More precisely, a bad economic situation, poor health and lack of satisfaction with life were linked to

the presence of suicidal intent.

On the other side, we found that suicidal intent and ideation are associated with several other factors which may be sociocultural, such as religious belief, the cultural acceptance of suicide among the elderly, relationship/family support, a family history of suicide, suicidal behaviour in friends or the community, previous suicide attempts, family type, marital status, age, and suicidal behaviour. Of all these factors, those that showed the strongest identification in this respect were a) the definition of suicide and religion; when suicide was defined as a noble resolution for a personal problem or concern and the elderly have no religion, it was b) the presence of suicidal intent and/or ideation.

In addition, we found that suicidal intention and/or ideation (ETIIS) has a strong positive linear relationship with depression (0.694) and a moderate one with loneliness (0.558), and these were the dimensions that we considered intrinsic to the host in our explanatory model of suicide.

According to our model, the environmental dimensions are satisfaction with social support and quality of life, which correlate negatively with ETIIS, such that the higher the quality of life, lower is the suicidal intention and/or ideation; also the more satisfied individuals are with the social support (SSQ-S6), the less is suicidal intention and/or ideation. The dimensions that comprise the agent's risk of suicide, we found that sociocultural risk and suicidal ideation and intent correlated positively with each other.

It is apparent, then, that there is a negative relationship between the host factors or environmental factors: at low values of satisfaction with support and quality of life there are corresponding high levels of loneliness and depression, and therefore a high risk of suicide. Likewise, there is a positive relationship between host and the agent, which means that high levels of depression and loneliness represent an equally high risk of suicide, and vice versa.

The explanatory model of suicide we hypothesized was confirmed: suicidal ideation and intent joined the intrinsic host factors and loneliness (UCLA) to the agent. Thus, we can say that, in general, suicide intertwines aspects of the host, the environment and the agent and, as intrinsic dimensions of the host, we can identify depression (GDS) and loneliness (UCLA), which have a positive linear relationship. The environmental dimensions are satisfaction with social support and quality of life, which also show a positive relationship.

Figure 1 demonstrates how they relate to variables of the hypothesized model of suicide.

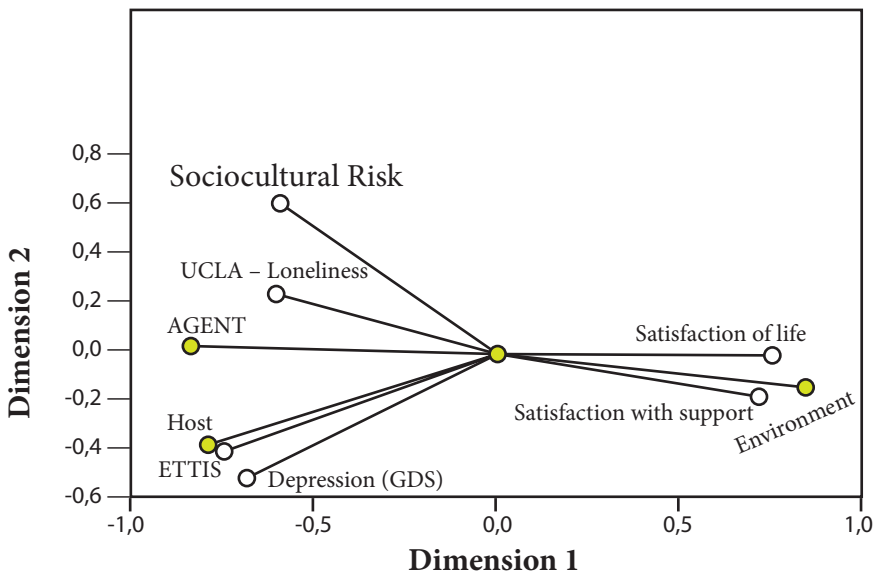

Figure 1 -Model of Suicide

At the intersection between these dimensions we have found that there is a negative relationship between the host and environmental factors: low values of satisfaction with support and quality of life show correspondingly high levels of loneliness and depression, and consequently, a high risk of suicide. Likewise, there is a positive relationship between the size of the host and the agent, which means that in the elderly population in general, high levels of depression and loneliness represent an equally high suicide risk.

CONCLUSION

As in the study of Hawton, Sutton, Haw, Sinclair, and Harriss (2005), this work found that suicidal intent and ideation are associated with sociocultural variables (religion, education and social representations of suicide); social-familial factors

(age, marital status, family support, family structure, family history of suicide, suicidal behavior of friends and community members); and personal history of suicide attempts. Outstanding among sociocultural factors are the representations of suicide and religious belief; in fact, suicidal intention/ideation was significantly associated with the definition of suicide as a noble resolution of a personal problem and a lack of faith or religious conviction. Masango et al. (2008) refers to the association between depression and suicide. In this study, suicidal intent and ideation (measured by ETIIS) show a strong positive linear relationship with depression (0.694) and a moderate relationship with loneliness (0.558), precisely the dimensions assigned to the host in the comprehensive model of suicide empirically tested in this study.

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Resumo / Abstract

The Interaction of Sociocultural Factors and Depression in the Elderly: Evaluating Suicidal Ideation and Suicidal Intention

The sample under study consisted of 372 Portuguese elderly persons from a community sample of Alentejo. Suicidal ideation and suicidal intent continue to be associated with sociocultural variables such as religion, education and social representation of suicide; social-familial factors such as age, marital status, family support, family structure, family history of suicide, suicidal behavior of friends or community members; and personal history of suicide attempts. Outstanding among sociocultural factors is the representation of suicide and religiosity. Overall, the suicidal intent and ideation show a strong relationship with depression and a moderate relationship with loneliness.

Keywords: Elderly, sociocultural factors, depression, suicidal ideation, suicidal intent.

A Interação de Fatores Socioculturais e Depressão nos Idosos: Avaliando a Ideação Suicidária e Intenção Suicidária

A amostra em estudo consistiu em 372 pessoas portuguesas idosas de uma comunidade do Alentejo. A ideação e intenção suicidárias continua a ser associada com variáveis socioculturais como religião, educação e a representação social do suicídio; fatores sociofamiliares como idade, estatuto marital, suporte familiar, comportamento suicida dos amigos ou membros da comunidade; e história pessoal de tentativas de suicídio. Proeminente entre os fatores socioculturais é a representação do suicídio e religiosidade. Em geral, a intenção e ideação suicidárias demonstram uma forte relação com a depressão e uma relação moderada com a solidão.

Palavras-chave: Idosos, fatores socioculturais, depressão, ideação suicidária, intenção suicidária.