Gender differences in risk factors related to suicidal ideation among callers to telephone helplines in Spain

Running head: Suicidal ideation among callers to helplines

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ABSTRACT

Objectives: The main goals of this study were to determine the prevalence rate of suicidal

ideation among callers to a Spanish telephone helpline (Teléfono de la Esperanza) and to

identify gender-based characteristics and risk factors related to suicidal ideation.

Method: A sample of 10,765 (6,868 men and 3,897 women) callers to this telephone

helpline was assessed. ATENSIS, an assessment tool designed to collect information

related to suicidal ideation among callers to telephone helplines, was used. Comparisons

between men and women with suicidal ideation were carried out in all variables studied:

sociodemographics, telephone call timing, risk factors, and suicidality. Results: Of the

total sample, 1.87% (n = 201) presented suicidal ideation, with a higher prevalence in

women (2.80%) than in men (1.34%). Moreover, significant gender-based differences

among callers with suicidal ideations were observed in some variables: women were older

than men and showed a greater prevalence of chronic disease with pain; men showed a

greater prevalence of depression, alcohol/drug abuse, helplessness, and lack of hope for

the future. Conclusions: This study showed that telephone helplines can be used to

identify suicidal ideation among callers. Moreover, gender-based differential

characteristics among suicide ideators have been found. The implications for further

research are discussed.

Keywords: Suicidal ideation; telephone helplines; assessment; risk factors; gender.

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INTRODUCTION

Suicide is an important public health problem. More than 800,000 people die from suicide every year (World Health Organization, 2014). Suicide is the leading external cause of death in Spain. According to a recent Spanish study, 42,905 people committed suicide between 2000 and 2012. The average annual incidence rate during this period was 9.5 suicides per 100,000 inhabitants (Santurtún, Santurtún, & Zarrabeitia, 2017). In 2015, 3,602 deaths by suicide were registered in Spain, involving 2,680 men and 922 women (Instituto Nacional de Estadística, 2017).

From a suicide prevention perspective, helplines can facilitate the identification of persons at risk for suicide (Gould et al., 2016; Witte et al., 2010). It is estimated that 3.7% of the population between the ages of 16 and 85 years has called a helpline because of an emotional and/or mental problem (Bassilios, Harris, Middleton, Gunn, & Pirkis, 2015). Helplines are run by organizations that specialize in crisis care and base their activity on listening to telephone callers. They are present all over the world and are an important communication point for people with suicidal ideation (Ohtaki et al., 2017). Some helplines are specifically focused on suicide (Pil, Pauwels, Muijzers, Portzky, & Annemans, 2013; Ramchand et al., 2017). In a study carried out in one of them (Pil et al., 2013), it was estimated that the helpline prevented approximately 36% of suicides and suicide attempts over a period of ten years. Therefore, helplines can play an important role in preventing suicide (Tyson et al., 2016). However, little is known about the characteristics of telephone callers with suicidal ideation.

Some studies have provided characteristics of helpline callers. They were mainly single, women, unemployed, suffering from emotional problems due to stressful events, presenting with depression and/or anxiety symptoms, and exhibiting indications of

suicidal ideation (Bassilios et al., 2015). Specifically, a recent study of callers to suicide crisis hotlines showed that 57% were women, 45% reported interpersonal problems, 51% had mental disorders, 27% had financial difficulties, and 25% had physical diseases (Ramchand et al., 2017). In this same study, 13% of callers reported loss traumas, and 21% verbalized suicidal ideation. From a gender perspective, scarce information about the differential profiles between men and women can be found. A few studies have shown a higher prevalence in women (Ramchand et al., 2017; Witte et al., 2010), and only one study has analysed the gender-based differences in the themes expressed in suicide calls (Barber, Blackman, Talbot, & Saebel, 2004).

In Spain, Teléfono de la Esperanza (TE) is the main helpline providing telephone listening and support for callers in crisis situations. TE is available across the entire country, and counsellors are specifically trained in active listening to provide emotional support. However, there are no studies on this helpline regarding the prevalence and characteristics of callers with suicidal ideation. Therefore, the main goals of this study were, first, to determine the prevalence rate of suicidal ideation among callers to this helpline and, second, to identify gender-based characteristics and risk factors related to suicidal ideation among callers to TE. This is the first study to analyse specific gender-based suicidal characteristics among callers to a helpline.

METHODS

The protocol for this study was approved by the ethics committees of the Public University of Navarra (PI-005/16) and the Teléfono de la Esperanza (03/2016).

Participants

The initial sample consisted of 10,765 callers (6,868 men, 63.8%; 3,897 women, 36.2%) to the TE telephone helpline in Navarra (Spain) from January 2016 to

September 2017. TE is the best-known Spanish helpline aimed at providing telephone counselling to people seeking help for any type of problem. This research includes calls to the helpline in the region of Navarra.

The admission criteria were as follows: a) calling the TE helpline to seek help and b) presenting with suicidal ideation. Using these criteria, 201 people were included in the study.

The mean age of the 201 participants included in the study was 49 years (SD = 14.3 years). The sample included 92 (45.8%) men and 109 (54.2%) women. Most of the callers were Spanish (94.5%), 45.1% were single, and 39% were retired (Table 1).

PLACE TABLE 1 HERE

Instruments

The *ATENSIS* (Villanueva, 2014) is an assessment tool designed to collect information related to suicidal ideation among callers to telephone helplines. It was developed by considering empirical data describing suicide risk assessment and risk factors for suicide (Oquendo, Halberstam, & Mann, 2003; Posner et al., 2011).

Specifically, it includes the Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011) and considers the Interpersonal-Psychological Theory of Suicidal Behavior (Joiner, 2005) and the Integrated Motivational-Volitional Model of Suicidal Behaviour (IMV; O'Connor, 2011). Questions are adapted for use in a telephone interview format. The instrument identifies behaviours that may be indicative of an individual's intent to commit suicide. Specifically, it consists of 4 sections: sociodemographic variables, telephone call timing characteristics, suicide risk factors (physical disease, mental disorder, life crisis, loneliness, capability for suicide attempt) and suicidality variables (suicidal ideation and suicidal behaviour). *ATENSIS* provides 5 levels of suicidal

ideation severity according to the C-SSRS (Posner et al., 2011) and classifies callers with suicidal ideation into four suicide risk categories: low, moderate, high and very high.

Procedure

Telephone counsellors were trained in the use of *ATENSIS*. Specifically, counsellors were instructed not to use the questionnaire as an interview but to conduct the calls according to the centre's protocol, which is based on active listening, and to use the questionnaire to collect information about several variables related to the caller's risk of suicide.

Calls were eligible for inclusion in the study if the counsellor deemed suicidal ideation to be present at any time during the call. Once suicidal ideation was detected, the counsellor addressed the conversation in order to explore and fulfil the areas included in *ATENSIS*.

After fulfilling the *ATENSIS* protocol, the caller's suicide risk was classified into one of four levels: very high, high, moderate, and low. According to the risk observed, the counsellor offered different orientations to cope with the problem: face-to-face professional help, hospital emergency assistance, mental health services, family support, agreement for calling again, and/or development of a security plan.

Data Analysis

Descriptive analyses were performed on all variables. In the bivariate analyses between men and women, a $\chi 2$ or Student's t-test for independent samples was used, depending on the nature of the variables analysed. A difference of p < .05 was considered significant. All statistical analyses were performed using SPSS (version 23.0) software.

RESULTS

Prevalence of suicidal ideation among callers to the telephone helpline

The presence of some type of suicidal ideation was identified in 201 cases (92 men and 109 women) of the 10,765 telephone calls received at the TE helpline during the study period. Therefore, the identified prevalence rate of suicidal ideation among telephone callers was 1.87%, with statistically significant differences ($X^2 = 28.8$; p = .000) between men (1.34%) and women (2.80%).

Gender differences in callers with suicidal ideation

Sociodemographic characteristics

A comparison of sociodemographic characteristics between men and women is presented in Table 1. The results showed statistically significant differences in some variables: age, marital status, and employment situation. Specifically, women were older than men. Moreover, the rates of widowhood and divorce were higher in women, and the rates of singlehood and marriage were higher in men. Finally, more men than women were employed, and more women than men were unemployed or retired. *Telephone call timing characteristics*

No differences between men and women were found with respect to call timing (Table 2). Most of the calls were made in summer or spring, on weekends, and in the evenings or night-time.

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Risk factors

Regarding the five risk factor categories explored with *ATENSIS*, 92.5% of callers with suicidal ideation presented with some type of life crisis, 72.1% with a diagnosed mental disorder, 67.7% with loneliness, and 20.9% with physical disease.

Moreover, 37.3% of the sample presented some risk factors that showed an acquired capability to attempt suicide (Table 3).

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A comparison of risk factors between men and women showed statistically significant differences for four variables. Women showed higher rates of chronic disease with pain; men showed higher rates of depression, alcohol/drug abuse, and helplessness.

Regarding other factors studied, most of the callers lacked coping skills and/or hope for the future. Significant differences were found in two factors: lack of hope for the future and drug abuse. Both of these factors were higher in men than in women. Suicidality variables

A comparison of suicidal ideation characteristics is shown in Table 4. Regarding the type of suicidal ideation, 29.4% of callers declared wish to be dead, 41.8% presented with suicidal thoughts, 20.4% had also planned a suicide method, and 8% presented with suicidal intent, half of whom had a specific plan. No gender-based differences in the types of suicidal ideation were found.

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On the other hand, 86.6% of callers verbalized their suicidal ideation, whereas in 13.4% of callers, the suicidal ideation was latent and was identified throughout the conversation. Most of the sample showed low to moderate intensity of suicidal ideation. No differences between men and women were found with respect to expression and intensity of suicidal ideation.

Regarding suicide behaviours, the rate of lifetime suicide attempts was 23.9% (14.4% in the last 3 months), without statistically significant differences between men

and women. There were also no significant differences in the other variables studied: preparatory acts in the last 3 months and self-injurious behaviour without suicidal intent.

Finally, all telephone callers with suicidal ideation were classified into the 4 suicide risk categories provided by *ATENSIS*. Most of the participants presented a moderate risk of suicide; however, 16.9% of the callers showed a high/very high risk. No significant differences between men and women were found with respect to risk.

DISCUSSION

This is the first study carried out in Spain regarding the prevalence and characteristics of suicidal ideators among callers to a telephone helpline. Moreover, gender differences were studied. The results from this study show that a relevant number of callers presented suicidal ideation, with higher prevalence in women than in men. Specifically, in this study 1.87% of callers expressed the presence of suicidal thoughts. This figure is higher than those found in the study of Till et al. (2013), which ranged from .31% to .45%, but is lower than the 6% found in the study by Barber et al. (2004). These data are not conclusive because, first, few studies have been developed to date and, second, different types of samples have been studied. While some studies focus specifically on suicide calls (Gould, Cross, Pisani, Munfakh, & Kleinman, 2013; Gould, Kalafat, HarrisMunfakh, & Kleinman, 2007), others explore the presence of suicidal ideation among people who call a helpline for any reason (Till et al., 2013). This study is focused on a general crisis helpline and, consequently, the rate of suicidal callers found is lower than those found in specific suicide hotlines. Therefore, more studies with homogeneous samples are needed.

Regarding the characteristics of suicide ideators, although more men than women called the helpline, the rate of suicidal ideation was higher in women than in men by a 2:1 ratio. Almost half of the ideators were aged between 30 to 49 years old and were single. Most of the ideators called in summer or spring, on weekends, and in the evening or night-time. Life crises, mental disorders and/or loneliness were present in most of the cases. Most of the callers lacked coping skills and/or hope for the future. This profile is similar to that found in the scarce studies of suicidal ideation carried out to date, which show a higher prevalence of women (Gould et al., 2007), as well as the relevance of emotional problems (Gould et al., 2016; Ramchand et al., 2017).

Approximately one of every four callers with suicidal ideation had previously attempted suicide, but most of the ideators presented a moderate risk of suicide. The number of suicide attempts found in this study was lower than that presented in other studies. For example, Witte et al. (2010) found that between 54% and 63% of the callers had ever attempted suicide.

From a gender perspective, some differences have been found in callers with suicidal ideation. The women were older, were partnered less frequently (ratio 1:6.5) than men (ratio 1:3.6), and were not employed in a higher proportion than men.

Moreover, the women were more likely to be affected by a chronic disease with pain.

Men presented more frequently depression, helplessness and lack of hope for the future.

Moreover, as found in Gould et al (2007), men presented higher alcohol and/or drug abuse. These results, although relevant, must be taken with caution due to the scarce studies specifically designed to analyse this phenomenon from a gender perspective. However, the differences found indicate that the gender perspective should be considered when analysing suicide behaviours of telephone callers.

Beyond gender differences, this study highlights the relevance of suicide among callers to telephone helplines. According to the World Health Organization, the number of suicides could reach one million people per year by 2030 if countries do not adopt plans to reduce these rates (World Health Organization, 2014). The World Health Organization intends to reduce the rate of suicides by 10% during the period between 2013 and 2020 (World Health Organization, 2013). The involvement of the different social agents, helplines included, is necessary, and it would be a mistake to limit prevention strategies to only national health systems (Fleischmann & De Leo, 2014). The identification of suicidal callers' characteristics, the active engagement of callers, and the use of combined strategies for intervening at different levels are essential for suicide prevention (Arias, 2013; Gould et al., 2016). Although some studies have found no gender differences in the active engagement of suicidal callers (Gould et al., 2016), more studies are needed. This study is a first step to characterize suicidal callers considering gender differences.

The present study has several limitations. First, the exploratory and descriptive nature of this study means that the specific causal role of risk factors explored cannot be established. Second, our study included callers to a specific telephone helpline in a region of Spain. Undoubtedly, this may create a bias that prevents us from generalizing the results to callers to other helplines in other settings and/or countries. Third, in this study a potential self-report bias in assessing for suicidal callers might have happened. Since this a general crisis helpline, not all callers are specifically asked about suicide, and consequently, some suicidal callers may have been missed. Perhaps some gender differences among missed suicidal callers could have been found. Fourth, it would be interesting to have a larger sample size. The gender differences found in this study

highlight a promising line of research. A larger sample size would make it possible to explore this issue more thoroughly. These methodological limitations might influence the findings and must be considered in further research.

In summary, this study showed that telephone helplines can be used to identify suicidal ideation among callers and that gender is a relevant variable to be considered. Due to the scarce number of papers on this topic, more research is needed.

DECLARATION OF INTEREST

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper.

REFERENCES

- Arias, H. A. (2013). Factores de éxito en programas de prevención del suicidio. Vanguardia Psicológica, 3(2), 215-225.
- Barber, J. G., Blackman, E. K., Talbot, C., & Saebel, J. (2004). The themes expressed in suicide calls to a telephone help line. *Social Psychiatry and Psychiatric Epidemiology*, 39(2), 121-125. doi:10.1007/s00127-004-0718-8
- Bassilios, B., Harris, M., Middleton, A., Gunn, J., & Pirkis, J. (2015). Characteristics of people who use telephone counseling: Findings from secondary analysis of a population-based study. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 621-632. doi:10.1007/s10488-014-0595-8
- Fleischmann, A., & De Leo, D. (2014). The World Health Organization's report on suicide: A Fundamental Step in Worldwide Suicide Prevention. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 35(5), 289-291. doi:10.1027/0227-5910/a000293
- Gould, M. S., Cross, W., Pisani, A. R., Munfakh, J. L., & Kleinman, M. (2013). Impact of Applied Suicide Intervention Skills Training (ASIST) on the National Suicide Prevention Lifeline Counselor: Interventions and suicidal caller outcomes.
 Suicide and Life-Threatening Behavior, 43(6), 676-691. doi:10.1111/sltb.12049
- Gould, M. S., Kalafat, J., HarrisMunfakh, J. L., & Kleinman, M. (2007). An evaluation of crisis hotline outcomes. Part 2: Suicidal callers. *Suicide and Life-Threatening Behavior*, *37*(3), 338-352. doi:10.1521/suli.2007.37.3.338
- Gould, M. S., Lake, A. M., Munfakh, J. L., Galfalvy, H., Kleinman, M., Williams, C., . .

 . McKeon, R. (2016). Helping callers to the National Suicide Prevention Lifeline who are at imminent risk of suicide: Evaluation of caller risk profiles and
 - Villanueva P., Arteaga A., Fernández-Montalvo J. (2018). Gender Differences in Risk Factors Related to Suicidal Ideation Among Callers to Telephone Helplines in Spain. Archives of Suicide Research. doi:10.1080/13811118.2018.1480987

- interventions implemented. Suicide and Life-Threatening Behavior, 46(2), 172-190. doi:10.1111/sltb.12182
- Instituto Nacional de Estadística. (2017). Estadística de defunciones según la causa de muerte. Madrid: Ministerio de Economía, Industria y Competitividad.
- Joiner, T. E. (2005). Why people die by suicide. Cambridge, MA: Harvard University Press.
- Ohtaki, Y., Oi, Y., Doki, S., Kaneko, H., Usami, K., Sasahara, S., & Matsuzaki, I.

 (2017). Characteristics of telephone crisis hotline callers with suicidal ideation in Japan. *Suicide and Life-Threatening Behavior*, 47(1), 54-66.

 doi:10.1111/sltb.12264
- Oquendo, M. A., Halberstam, B., & Mann, J. J. (2003). Risk factors for suicidal behavior: Utility and limitations of research instruments. In M. B. First (Ed.), *Standardized evaluation in clinical practice* (pp. 103-130).
- O'Connor, R. C. (2011). The Integrated Motivational-Volitional Model of Suicidal Behavior. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 32(6), 295-298. doi:10.1027/0227-5910/a000120
- Pil, L., Pauwels, K., Muijzers, E., Portzky, G., & Annemans, L. (2013). Cost-effectiveness of a helpline for suicide prevention. *Journal of Telemedicine and Telecare*, 19(5), 273-281. doi:10.1177/1357633x13495487
- - Villanueva P., Arteaga A., Fernández-Montalvo J. (2018). Gender Differences in Risk Factors Related to Suicidal Ideation Among Callers to Telephone Helplines in Spain. Archives of Suicide Research. doi:10.1080/13811118.2018.1480987

- Ramchand, R., Jaycox, L., Ebener, P., Gilbert, M. L., Barnes-Proby, D., & Goutam, P. (2017). Characteristics and proximal outcomes of calls made to suicide crisis hotlines in California. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 38(1), 26-35. doi:10.1027/0227-5910/a000401
- Santurtún, M., Santurtún, A., & Zarrabeitia, M. T. (2017). ¿Afecta el medio a los suicidios que se cometen en España? Análisis descriptivo del patrón temporoespacial. *Revista de Psiquiatría y Salud Mental*.

 doi:https://doi.org/10.1016/j.rpsm.2017.05.001
- Till, B., Sonneck, G., Baldauf, G., Steiner, E., & Niederkrotenthaler, T. (2013). Reasons to love life. Effects of a suicide-awareness campaign on the utilization of a telephone emergency line in Austria. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 34(6), 382-389. doi:10.1027/0227-5910/a000212
- Tyson, P., Law, C., Reed, S., Johnsey, E., Aruna, O., & Hall, S. (2016). Preventing suicide and self-harm evaluating the efficacy of a helpline from a service user and helpline worker perspective. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 37(5), 353-360. doi:10.1027/0227-5910/a000390
- Villanueva, P. (2014). ATENSIS. Base de datos para la evaluación e intervención en la conducta suicida. Pamplona: Registro General de la Propiedad Intelectual (00/2014/957).
- Witte, T. K., Gould, M. S., Munfakh, J. L. H., Kleinman, M., Joiner, T. E., & Kalafat, J. (2010). Assessing suicide risk among callers to crisis hotlines: A confirmatory factor analysis. *Journal of Clinical Psychology*, 66(9), 941-964. doi:10.1002/jclp.20717
 - Villanueva P., Arteaga A., Fernández-Montalvo J. (2018). Gender Differences in Risk Factors Related to Suicidal Ideation Among Callers to Telephone Helplines in Spain. Archives of Suicide Research. doi:10.1080/13811118.2018.1480987

World Health Organization. (2013). *Mental Health Action Plan 2013-2020*. Geneva: Author.

World Health Organization. (2014). *Preventing suicide: A global imperative*. Geneva: Author.

Table 1Comparison of sociodemographic variables

	All	Men	Women		
	(N = 201)	(n = 92)	(n = 109)		
	Mean (SD)	Mean (SD)	Mean (SD)	t (df)	р
Age (years)	49 (14.3)	46.5 (13.4)	50.6 (15.2)	-2.0 (199)	.045
	N (%)	n (%)	n (%)	$X^{2}\left(df\right)$	p
Age (years)					
< 15	4 (2.0%)	1 (1.1%)	3 (2.8%)		
15 - 29	15 (7,5%)	7 (7,6%)	8 (7,3%)		
30 - 49	96 (47.8%)	53 (57.6%)	43 (39.4%)	7.9 (4)	.097
50 - 69	78 (38.8%)	29 (31.5%)	49 (45.0%)		
≥ 70	8 (4.0%)	2 (2.2%)	6 (5.5%)		
Marital status	(N = 195)	(n = 91)	(n = 104)		
Married	41 (21.0%)	25 (27.5%)	16 (15.4%)		
Divorced	42 (21.5%)	17 (18.7%)	25 (24.0%)	23.6 (3)	.000
Single	88 (45.1%)	48 (52.7%)	40 (38.5%)		
Widow(er)	24 (12.3%)	1 (1.1%)	23 (22.1%)		
Origin	(N = 201)	(n = 92)	(n = 109)	$X^{2}\left(df\right)$	р
Spain	190 (94.5%)	88 (95.7%)	102 (93.6%)		
Europe	4 (2.0%)	1 (1.1%)	3 (2.8%)	0.7 (2)	.690
South America	7 (3.5%)	3 (3.3%)	4 (3.7%)		
Employment situation	(N = 146)	(n = 70)	(n = 76)	$X^{2}\left(df\right)$	p
Employed	42 (28.8%)	28 (40.0%)	14 (18.4%)		
Unemployed	47 (32.2%)	20 (28.6%)	27 (35.5%)	8.4 (10)	.015
Retired	57 (39.0%)	22 (31.4%)	35 (46.1%)		

Table 2. *Comparison of telephone call timing characteristics*

	All	Men	Women		
	(N = 201)	(n = 92)	(n = 109)		
	N (%)	n (%)	n (%)	$X^{2}\left(df\right)$	p
Month					
January	5 (2.5%)	0 (0.0%)	5 (4.6%)		
February	22 (10.9%)	10 (10.9%)	12 (11.0%)		
March	21 (10.4%)	5 (5.4%)	16 (14.7%)		
April	26 (12.9%)	13 (14.1%)	13 (11.9%)		
May	14 (7.0%)	8 (8.7%)	6 (5.5%)		
June	15 (7.5%)	7 (7.6%)	8 (7.3%)	15.3 (11)	.168
July	9 (4.5%)	4 (4,3%)	5 (4.6%)		
August	36 (17.9%)	20 (21.7%)	16 (14.7%)		
September	37 (18.4%)	18 (19.6%)	19 (17.4%)		
October	5 (2.5%)	3 (3.3%)	2 (1.8%)		
November	4 (2.0%)	3 (3.3%)	1 (0.9%)		
December	7 (3.5%)	1 (1.1%)	6 (5.5%)		
Season					
Spring	76 (37.8%)	33 (35.9%)	43 (39.4%)		
Summer	82 (40.8%)	42 (45.7%)	40 (36.7%)	5.2 (11)	.158
Autumn	9 (4.5%)	6 (6.5%)	3 (2.8%)		
Winter	34 (16.9%)	11 (12.0%)	23 (21.1%)		
Day					
Monday	15 (7.5%)	8 (8.7%)	7 (6.4%)		
Tuesday	16 (8.0%)	6 (6.5%)	10 (9.2%)		
Wednesday	25 (12.4%)	9 (9.8%)	16 (14.7%)		
Thursday	19 (9.5%)	12 (13.0%)	7 (6.4%)	5.2 (6)	.516
Friday	40 (19.9%)	19 (20.7%)	21 (19.3%)		
Saturday	46 (22.9%)	18 (19.6%)	28 (25.7%)		
Sunday	40 (19.9%)	20 (21.7%)	20 (18.3%)		
Week timing					
Work days	75 (37.3%)	35 (38.0%)	40 (36.7%)	0.4	0.4.4
Weekend	126 (62.7%)	57 (62%)	69 (63.3%)	0.4	.844
Time	. ,	. , ,	. ,		
4 AM-12 AM	29 (14.4%)	11 (12.0%)	18 (16.5%)		
12 AM-8 PM	76 (37.8%)	38 (41.3%)	38 (34.9%)	1.3 (2)	.521
20 PM-4 AM	96 (47.8%)	43 (46.7%)	53 (48.6%)	` '	

Table 3. *Comparison of risk factors*

	All	Men	Women		
	(N = 201)	(n = 92)	(n = 109)		
	N (%)	n (%)	n (%)	$X^{2}\left(df\right)$	p
Physical disease	42 (20.9%)	9 (9.8%)	33 (30.3%)	0.6(1)	.449
Chronic disease with pain	30 (14.9%)	5 (5.4%)	25 (22.9%)	12.0(1)	.001
Degenerative disease	6 (3.0%)	3 (3.3%)	3 (2.8%)	.05 (1)	.833
Severe disability	8 (4.0%)	1 (1.1%)	7 (6.4%)	3.7 (1)	.054
Severe injuries	0 (0.0%)				
Mental disorder	145 (72.1%)	74 (80.4%)	71 (65.1%)	3.3 (4)	.506
Depression	77 (38.3%)	43 (46.7%)	34 (31.2%)	5.1 (1)	.024
Schizophrenia	27 (13.4%)	9 (9.8%)	18 (16.5%)	1.9(1)	.163
Psychosis	8 (4.0%)	3 (3.3%)	5 (4.6%)	0.2(1)	.632
Personality disorder	46 (22.9%)	21 (22.8%)	25 (22.9%)	0.0(1)	.985
Severe anxiety	31 (15.4%)	16 (17.4%)	15 (13.8%)	0.5 (1)	.478
Alcohol/drug abuse	17 (8.5%)	12 (13.0%)	5 (4.6%)	4.6 (1)	.032
Impulsiveness	12 (6.0%)	5 (5.4%)	7 (6.4%)	0.1(1)	.769
Life crisis	186 (92.5%)	88 (95.7%)	98 (89.9%)	4.0(6)	.676
Losses	68 (33.8%)	30 (32.6%)	38 (34.9%)	0.1(1)	.737
Helplessness	80 (39.8%)	46 (50.0%)	34 (31.2%)	7.4(1)	.007
Feelings of worthlessness	123 (61.2%)	59 (64.1%)	64 (58.7%)	0.6(1)	.433
Feeling of being trapped	102 (50.7%)	50 (54.3%)	52 (47.7%)	0.9(1)	.348
Burdensomeness	36 (17.9%)	17 (18.5%)	19 (17.4%)	0.4(1)	.847
Lack of life sense	69 (34.3%)	37 (40.2%)	32 (29.4%)	2.6(1)	.106
Loneliness	136 (67.7%)	63 (68.5%)	73 (67.0%)	-	-
Loneliness	134 (66.7%)	62 (67.4%)	72 (66.1%)	0.0(1)	.841
Isolation	8 (4.0%)	4 (4.3%)	4 (3.7%)	0.0(1)	.806
Self-abandonment	11 (5.5%)	7 (7.6%)	4 (3.7%)	1.5 (1)	.221
Attempt capability	75 (37.3%)	39 (42.4%)	36 (33.0%)	3.2(2)	.197
Several lifetime suicide attempts	22 (10.9%)	11 (12.0%)	11 (10.1%)	0.2(1)	.673
One lifetime suicide attempt	38 (18.9%)	21 (22.8%)	17 (15.6%)	1.7(1)	.192
Self-injuries	11 (5.5%)	3 (3.3%)	8 (7.3%)	1.6(1)	.205
Lifetime abuse	15 (7.5%)	5 (5.4%)	10 (9.2%)	1.0(1)	.315
Severe alienation	4 (2.0%)	3 (3.3%)	1 (0.9%)	1.4(1)	.236
Other factors					
Lack of coping skills	159 (79.1%)	73 (79.3%)	86 (78.9%)	0.0(1)	.938
Life dissatisfaction	27 (13.4%)	12 (13.0%)	15 (13.8%)	0.0(1)	.882
Lack of hope for the future	122 (69.7%)	68 (73.8%)	54 (49.5%)	12.4(1)	.000
Drug abuse	17 (8.5%)	12 (13.0%)	5 (4.6%)	4.6 (1)	.032
Acute stress due to a loss	68 (33.8%)	30 (32.6%)	38 (34.9%)	0.1(1)	.737

Table 4 *Comparison of suicidality variables*

	All	Men	Women		
	(N = 201)	(n = 92)	(n = 109)		
	N (%)	n (%)	n (%)	$X^{2}\left(df\right)$	p
Suicidal ideation					
Severity of suicidal ideation					
Wish to be dead	59 (29.4%)	20 (21.7%)	39 (35.8%)		
Suicidal Thoughts	84 (41.8%)	42 (45.7%)	42 (38.5%)		
Suicidal Thoughts with Method	42 (20.9%)	21 (22.8%)	21 (19.3%)	5.2 (4)	.266
Suicidal Intent without Specific Plan	8 (4.0%)	4 (4.3%)	4 (3.7%)		
Suicidal Intent with Specific Plan	8 (4.0%)	5 (5.4%)	3 (2.8%)		
Expression of suicidal ideation					
Verbalized	174 (86.6%)	83 (90.2%)	91 (83.5%)	1.0 (1)	.163
Latent	27 (13.4%)	9 (9.8%)	18 (16.5%)	1.9 (1)	
Suicidal Ideation Intensity					
Very low	15 (7.5%)	4 (4.3%)	11 (10.1%)		
Low	98 (48.8%)	41 (44.6%)	57 (52.3%)		
Moderate	73 (36.3%)	41 (44.6%)	32 (29.4%)	6.2 (3)	.102
High	15 (7.5%)	6 (6.5%)	9 (8.3%)		
Very high	0				
Suicide behaviour					
Lifetime suicide attempts	48 (23.9%)	26 (28.3%)	22 (20.2%)	1.8 (1)	.181
Suicide attempts in last 3 months	29 (14.4%)	13 (14.1%)	16 (14.7%)	0.0(1)	.912
Preparatory acts in last 3 months	27 (13.4%)	13 (14.1%)	14 (12.8%)	0.1(1)	.790
Self-injurious behaviour without					
suicidal intent	11 (5.5%)	3 (3.3%)	8 (7.3%)	1.6(1)	.205
Risk of suicide					
Low	6 (3.0%)	2 (2.2%)	4 (3.7%)		.895
Moderate	161 (80.1%)	75 (81.5%)	86 (78.9%)	0.6 (2)	
High	31 (15.4%)	14 (15.2%)	17 (15.6%)	0.6 (3)	
Very high	3 (1.5%)	1 (1.1%)	2 (1.8%)		