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Stressful life events as proximal risk factors for a suicide crisis: Case-control study

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ABSTRACT

Introduction. Suicide is one of the main challenges worldwide. Every year 800,000 people die by suicide. There is evidence that life stressful events are associated to suicidal behaviour. Our aim in this case-control study is to explore their role as triggers of suicidal behaviour.

Methods. This case-control study was carried out in the Department of Psychiatry of the Fundación Jiménez Díaz. The case group consists of 320 adult patients treated in the Foundation service after an attempted suicide. The control group consists of 640 adult psychiatric patients treated for any other reason. The main variable has been the suicide attempt and the independent variable has been published in the last 6 months. To measure the occurrence of a SLEs in the last six months, we used the List of Threatening Experiences.

Results. Having experienced a SLEs was associated with a suicide attempt (RR = 1.475, 95% CI, p = 0.001). The specific SLEs that showed a statistically positive association were having broken a stable relationship, having personal problems with someone close to the environment and not finding a job or suffering a serious economic crisis.

Conclusions. Suffering an SLEs significantly increases the risk of suicide in the following 6 months. Having broken

a stable relationship is presented as the most important. More studies are needed to explore the role of SLEs as precipitating factors of suicidal behaviour.

Keywords. Suicide, stressful life event, prevention.

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ACONTECIMIENTOS VITALES ESTRESANTES COMO FACTORES DE RIESGO PROXIMALES PARA UNA CRISIS SUICIDA: ESTUDIO DE CASOS Y CONTROLES

RESUMEN

Introducción. El suicidio produce casi un millón de muertes al año en todo el mundo. Los acontecimientos vitales estresantes podrían jugar un papel clave en las últimas fases de la trayectoria suicida. Nuestro objetivo en este estudio de casos y controles es explorar su papel como factores precipitantes de la conducta suicida.

Metodología. Este estudio se realizó en el Departamento de Psiquiatría de la Fundación Jiménez Díaz. El grupo de casos consiste en 320 pacientes adultos atendidos en el servicio de la Fundación tras realizar un intento de suicidio. El grupo control son 640 pacientes psiquiátricos adultos atendidos por cualquier otro motivo. La variable principal fue el intento de suicidio y la variable independiente fue haber experimentado un acontecimiento vital estresante (AVE) en los últimos 6 meses. Para medir los AVEs, se utilizó el *List of Threatening Experiences*.

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Resultados. Haber experimentado un AVE fue asociado significativamente con cometer un intento de suicidio (RR = 1,475, IC del 95, $p = 0,001$). Los AVEs específicos que mostraron una asociación positiva estadísticamente fueron haber roto una relación estable, tener problemas personales con alguien cercano del entorno y no encontrar empleo o sufrir una crisis económica grave.

Conclusiones. Sufrir un AVE incrementa significativamente el riesgo de suicidio en los 6 meses siguientes. Haber roto una relación estable se presenta como el más importante. Se necesitan más estudios en el futuro para seguir profundizando en el papel de los AVEs como desencadenantes proximales de la conducta suicida.

Palabras clave. Suicidio, acontecimiento vital estresante, prevención

INTRODUCTION

Suicide is one of the most significant public health challenges worldwide. Every year more than 800,000 people die by suicide, and it is estimated that the number of attempted suicides is twenty times higher¹. Suicide is the leading cause of unnatural death in Spain and the second leading cause of death in general in the young population².

Unlike other public health problems, the mortality and morbidity of suicidal behaviour have not decreased in recent decades, partly due to the lack of valid risk predictors³. Several factors are associated with suicide, but none of them is accurate enough as a stand-alone clinical marker of suicide risk⁴.

Recently, some authors have attempted to create integrative models to encompass all facets of suicidal behaviour. Among the most widely accepted is the motivational-volitional model of O'Connor & Kirtley⁵. This model understands suicide as a dynamic process, in which different risk factors play a role in three distinct phases —pre-motivational, motivational and volitional— ultimately resulting in suicidal behaviour. In the final, volitional phase, precipitating factors such as access to media, impulsivity, past suicide attempts or Stressful Live Events (SLEs), are associated with suicide attempts⁵.

Another widely accepted model is the one developed by Turecki & Brent⁶, which also distinguishes three stages: distal, medial and proximal. In the proximal stage, factors such as substance abuse, biology and genetics, hopelessness, depressed mood or SLEs stand out. From a preventive point of view, the more proximal factors our study focuses on are of particular importance.

SLEs are a recognised suicide risk factor for suicidal behaviour. In the motivational-volitional model, SLEs are considered a distal risk factor, while in the integrated model of Turecki & Brent⁶, their dual nature is reflected: as a distal risk factor when they occur at an early age, and as a precipitating factor when they occur in adulthood.

Several studies have linked the presence of SLEs to suicide^{7,8}. Some of them have considered SLEs as a unitary concept, without considering the weight of the different events on subsequent suicidal behaviour, while others have studied each of the events separately. Thus, Chen & Roberts⁹ found that the SLE associated with a higher risk of suicidal behaviour in males was having had a criminal legal problem with an OR of 2.76, while in females the highest risk was having had intimate partner problems with an OR of 2.04. In another study¹⁰, a recent break-up, with an OR of 1.88, was the SLE associated with a higher risk of suicidal behaviour in young adolescents. Other SLEs, such as family losses or conflicts with relatives, were also important. Besides, depressive mood, disruptive behaviour disorder or substance abuse disorders increased the risk of suicidal behaviour.

Furthermore, these studies tend to focus on the long-term effect of SLEs, with less attention to the short-term effects, i.e., their action on the later stages of the suicidal trajectory.

This study aims to explore the role of SLEs as precipitating factors of suicidal behaviour. To do so, we used a case-control design to study the presence of SLEs in the last six months as triggers of a suicidal crisis.

MATERIAL AND METHODS

Context

This study was carried out at the University Hospital Fundación Jiménez Díaz. It was approved by the hospital's Ethics Committee and followed the standards set out in the Declaration of Helsinki.

Design and sample

Our study has a longitudinal, retrospective, case-control design. All patients were recruited from the Department of Psychiatry of the Fundación Jiménez Díaz (Madrid, Spain). Cases were 320 adult patients attended at the Fundación Jiménez Díaz Emergency Department (ED) for a suicidal crisis, a concept that includes both a suicide attempt and severe suicidal ideation as measured by the Columbia Suicide Severity Rating Scale (CSSRS)¹¹. Con-

trols were 640 adults attended for any other reason in the outpatient mental health clinic of the same hospital. Controls were selected from a total sample of 11,274 patients and were matched by sex and age with cases, achieving a 2:1 ratio (controls: cases). Exclusion criteria were being under 18 years old, unable to answer the questionnaires, and having a cognitive impairment that prevented understanding and informed consent. Recruitment and completion of the questionnaires were carried out by psychiatrists, clinical psychologists and psychiatric registrars. All patients signed informed consent to participate in the study. Data collection took place between May 2014 and September 2016.

Data collection and measures

Data were collected using the digital platform *ME-mind*, which is routinely used in the psychiatry department of the University Hospital Fundación Jiménez Díaz. This platform contains several standardised questionnaires and forms for the collection of socio-demographic data, diagnosis and current treatment.

The main outcome was the presentation of a suicidal crisis attended in the emergency department. Variables related to this event were the method chosen in the case of attempted suicide (drug intoxication, hanging, cutting, asphyxia, burn, firearm and precipitation). The independent variables collected were clinical diagnosis, stressful life events and socio-demographic factors.

Psychiatric diagnosis was established clinically according to the International Classification of Diseases 10th Edition (ICD-10)¹².

Suicidal ideation was measured using the CSSRS. The questionnaire used to collect SLEs was the List of Threatening Experiences by Brugha *et al.*¹³. This 12-item questionnaire covers a wide range of SLEs occurring in the six months before the interview.

Statistical analysis

All statistical analyses were performed using SPSS software version 24.0. We calculated the frequency of SLEs in both cases and controls and the prevalence of clinical and socio-demographic variables. We performed a binary logistic regression to explore associations between the main and independent variables and constructed a multivariate association model to reveal factors independently associated with suicide attempts. All tests were two-tailed, with 95% confidence intervals (CIs). Statistical significance was set at $p < 0.05$.

RESULTS

The baseline characteristics of cases and controls are shown in table 1. The gender distribution was similar for both groups, with a higher percentage of females in both groups. Regarding marital status, cases were more often single and separated. Regarding employment status, cases were more often students, unemployed and temporarily disabled. The most frequent diagnosis in both groups was anxiety disorders.

Of the 320 controls, 62 came to the ED for a suicide attempt. The most frequent suicide method was drug overdose (85%). Two hundred fifty-eight patients presented to the ED with suicidal ideation.

We found a higher frequency of SLEs in the last six months among cases compared to controls (see figure 1). Specifically, the most frequently found SLEs among cases were a relationship break-up, problems with someone close, unemployment, and economic crisis. Experiencing an LSE was significantly associated with committing a suicide attempt (RR = 1.475, 95% CI, $p = 0.001$) (see Table 2). Concerning specific SLEs, those with a statistically significant positive association were: break-up, problems with someone close, unemployment and suffering an economic crisis. A friend's death was significantly and negatively associated with the risk of suicide attempt, while the rest produced non-significant results. The LSE with the strongest association with suicide attempt was a relationship break-up (RR= 2.156, 95% CI, $p < 0.001$).

Table 3 shows other factors that significantly increased the risk of suicide attempt: being separated/divorced, having a diagnosis of Axis I psychiatric pathology, and, to an even greater extent, having a diagnosis on Axis II and having comorbidity between the two axes.

Three variables were significantly and independently associated with suicide attempts in the multivariable association model: any LSE (RR = 1.402, 95% CI), comorbidity between Axes I and II (RR = 95% CI, $p = 0.013$) and older age (RR = 0.972, 95% CI, $p < 0.001$).

DISCUSSION

SLEs, in general, as well as certain SLEs considered individually, have shown a significant association with suicide attempts. Thus, our results suggest that SLEs are a triggering factor for suicide attempts and suicidal ideation. The time frame considered (last six months) indicates that SLEs can increase suicidal ideation and suicide risk in the short term.

Table 1 | Baseline characteristics of the sample

	Cases (n = 320)		Controls (n = 640)	
	%	Media (DE)	%	Media (DE)
Gender				
Male	38,8 %		38,8 %	
Female	61,3 %		61,3 %	
Age (years)		41,5 (14,36)		41,5 (14,36)
Marital status				
Married/coupled	33,7 %		53,5 %	
Separated/divorced	48,3 %		35,3 %	
Single	16,2 %		9,6 %	
Widowed	1,9 %		1,6 %	
Previous suicide attempts (yes/no)	52,5 %		0 %	
Number of previous suicide attempts	21,5 %			
One	11,9 %			
Two	19,1 %			
Three or more				
Employment status	54,0 %		39,8 %	
Active/student	25,2 %		31,2 %	
Unemployed	15,7 %		23,7 %	
Disabled	5,1 %		5,3 %	
Retired				
Psychiatric diagnosis	30,2 %		23,5 %	
Affective disorders	44,6 %		44,5 %	
Anxiety disorders	7,0 %		18,1 %	
Psychotic disorders	18,5 %		8,7 %	
Substance use	33,9 %		14,2 %	
Personality disorders	5 %		11,9 %	
Other diagnoses				
Suicide method	85,6 %			
Overdose	1,4 %			
Hanging	2,8 %			
Jumping	1,2 %			
Drowning	10,4 %			
Cutting	0,7 %			
Burning	0,7 %			
Firearm				

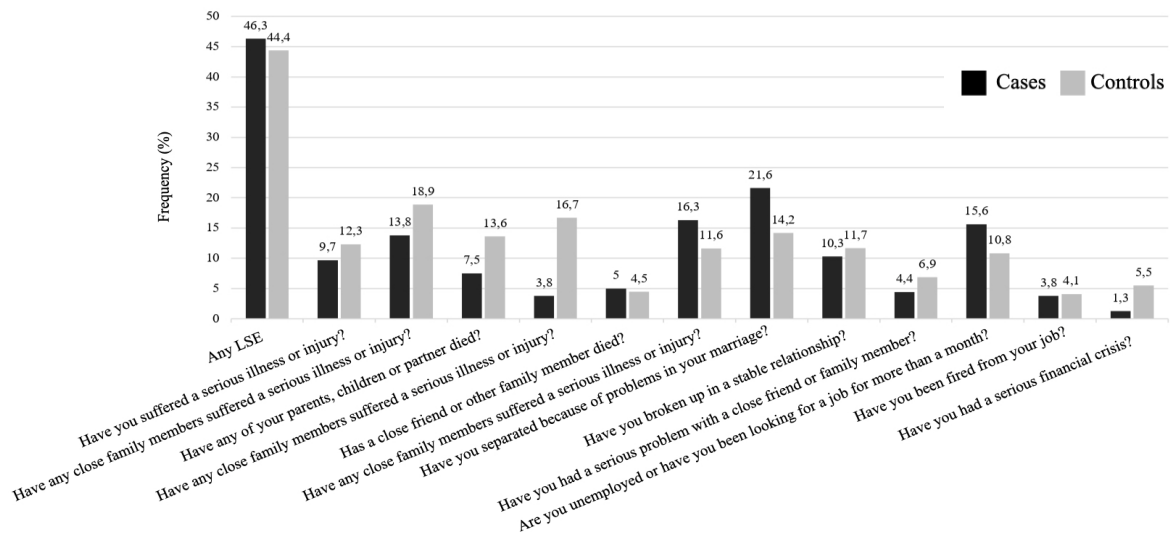


Figure 1 | Frequency of last-6-months life stressful events in cases and controls

Table 2		
Association between suicide attempt and last-6-months life stressful event		
	OR (95 % CI)	Valor <i>p</i>
Any LSE	0,93 (0,71–1,21)	0,582
Number of SLEs	0,94 (0,86–1,02)	0,119
Have you suffered a serious illness or injury?	0,76 (0,49–1,18)	0,224
Have any close family members suffered a serious illness or injury?	0,68 (0,47–1,00)	0,470
Have any of your parents, children or partner died?	0,52* (0,32–0,83)	0,006
Has a close friend or other family member died?	0,19* (0,11–0,36)	0,000
Have you separated because of problems in your marriage?	1,11 (0,59–2,07)	0,746
Have you broken up in a stable relationship?	1,48* (1,01–2,18)	0,044
Have you had a serious problem with a close friend or family member?	1,66* (1,17–2,35)	0,004
Are you unemployed or have you been looking for a job for more than a month without success?	0,87 (0,56–1,34)	0,516
Have you been fired from your job?	0,62 (0,33–1,15)	0,129
Have you had a serious financial crisis?	1,53* (1,04–2,27)	0,033
Have you had legal problems?	0,92 (0,46–1,85)	0,815
Have you been robbed or have you lost something of value?	0,22* (0,08–0,62)	0,004

*Statistically significant (p<0,05)
OR = Odds Ratio

Comparison with previous literature

Our studies are consistent with the findings of previous studies, such as Asgeirdottir et al. (2018)¹⁴, in which over three-quarters of patients with suicidal behaviour experienced some SLEs. Other studies^{15,16} also pointed to the relevance of SLEs as a risk factor for suicidal behaviour. Heikkinen et al. (1995)¹⁷ found an association between having a somatic illness in the last three months and committing suicide in the elderly (60 years). Some studies find an association between suicide attempts and family problems, bereavement, financial problems, un-

Table 3			
Other factors associated with suicidal behaviour/ideation			
	OR (95 % CI)	p value	
Marital Status	Married	1 (ref)	
	Single	2,17* (1,60–3,00)	< 0,001
	Separated/ Divorced	2,67* (1,71–4,16)	< 0,001
	Widowed	1,85 (0,64–5,32)	0,254
Employment status	Active/ Student/ Homemaker	1 (ref)	
	Unemployed	0,60* (0,43–0,84)	0,003
	Retired	0,71 (0,37–1,37)	0,306
	Disabled	0,49* (0,33–0,72)	< 0,001
Diagnosis	Substance abuse	1,88* (1,40–2,52)	< 0,001
	Psychotic disorder	0,41* (0,27–0,63)	< 0,001
	Affective disorder	1,23 (0,96–1,57)	0,095
	Anxiety disorders	0,90 (0,71–1,14)	0,395
	Personality disorders	2,67* (1,98–3,58)	< 0,001
	Other	0,07* (0,01–0,52)	0,009

*Estadísticamente significativo (p < 0,05)
OR = Odds Ratio

employment, and change of residence in younger people. Srivastava et al., (2004)¹⁸ found an association between suicide attempts in young people in the following order of importance: unemployment, lack of formal education, SLEs in the last six months (economic problems and interpersonal conflicts within the couple and family being the most frequent), physical illness and chronic pain. Irigoyen et al., (2018)¹⁹ also observed an association between a suicide re-attempt in the last six months and three risk factors: Cluster B personality disorders, poor therapeutic adherence, and a history of two or more previous suicide attempts. Finally, another study²⁰ also found an association between suicide attempts and alcohol abuse and SLEs only one hour before committing suicide.

With some exceptions, most of these studies assessed SLEs across the lifespan^{21,22}, whereas our study focused on SLEs as proximal factors. More recent studies contribute

to the evidence on the role that SLEs play in the shorter term, with reference periods ranging from one month to one year^{23,24}, which more closely resembles the findings of our study. For instance, Liu & Zhang²³ found that the types of SLEs that were most likely to trigger a suicide attempt in a rural sample of Chinese people (N=791) were problems with spouse (OR=5.43), family (OR=2.46) and friends (OR=2.43). In our study, the most relevant SLE was a relationship break-up. Other studies have also found this crucial factor, especially in young people⁹, while others gave greater importance to other factors. For instance, in a South African study²⁵, the death of a loved one, witnessing violence and sexual abuse were the SLEs most strongly associated with suicide. Cross-cultural differences could partially explain these differences.

Both the presence of Axis II pathology and comorbidity between Axis I and Axis II diagnoses emerged as important factors associated with suicidal behaviour in our study. A pathological personality may predispose to suicidal behaviour through dysfunctional social interaction, which would prevent the creation of stable bonds with others and predispose to the absence of a support network. Previous studies have also shown an association between personality disorders and suicide risk. A recent prospective study in a Spanish population identified Cluster B personality disorders as one of the main factors associated with suicidal behaviour¹⁹. A recent French study²⁶ also found that patients with borderline personality disorder were nine times more likely to have a "major suicide repeaters" profile. Furthermore, many studies^{27,28,29} show the association between personality disorders, depressive states and post-traumatic stress disorder, which are strongly associated with suicidality.

In our study, the LSE most strongly associated with suicidal behaviour was a relationship break-up. This finding may be striking when compared to SLEs with an apparent higher traumatic potential such as bereavement. However, it should be noted that the majority of attempts were made with the less-lethal method of drug overdose. In the type of attempts due to a break-up, feelings of impulsivity may be involved, with little suicidal planning, and the possible intention of inducing a reaction in others. In this sense, some authors defend the existence of different suicidal phenotypes, such as suicide attempters versus completers, or the "major suicide repeaters" phenotype^{31,32}. In our study, almost 20% of the participants had committed three or more previous suicide attempts. Impulsivity has been found to play an essential role in people with a higher number of previous attempts^{31,32}. Suicide is a very complex human behaviour, and we may be trying to unify diverse concepts under a single term.

Implications for clinical practice

SLEs can be proximal suicide risk factors, producing an acute/subacute impact, which can trigger an impulsive act with fatal consequences in the short term. Therefore, assessment of SLEs may play a crucial role in preventing suicidal behaviour in clinical practice.

Given the growing evidence on the importance of SLEs as proximal factors to suicidal behaviour, one may wonder about the need to include questions about them in the anamnesis in the presence of other risk factors for suicide, such as depression or a history of previous suicide attempts²⁰. This approach will require adequate tools for the early detection of suicidal behaviour and professionals who are informed and trained to do an adequate screening. There are brief suicide protocols that allow for the inclusion of these kinds of questions without unduly increasing the screening time. This is a practice carried out by our research team in the ED, where this study was conducted. On the other hand, the change of care that starts in the ED involves adequate medical attention, guaranteeing the patient's physical well-being, followed by referral to the psychiatric services, which will attend the patient first in the ED and then continue the follow-up through outpatient consultations. The inclusion of questions on self-harm ideation in at-risk patients' anamnesis is still a pending issue in primary care^{33,34,35}.

Limitations

One of our study's limitations is the recall bias, whereby a person with a greater state of distress can recall SLEs that occurred in the past with greater intensity. Finally, there were no completed suicide attempts in our sample, which may be because many of these attempts do not reach the ED, as death occurs before medical help can be received.

CONCLUSION

Suffering an LSE significantly increases the risk of suicide in the next six months, acting as a proximal factor on the path to suicide. Breaking up a relationship emerges as the most powerful LSE in contrast to more apparently traumatic experiences, such as losing a loved one. As shown in previous studies, personality disorders are important risk factors for suicide. The frequent difficulties with personal relationships and intimacy experienced by people with a personality disorder may increase the impact of SLEs related to their role as a trigger for suicidal behaviour.

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DECLARATION OF INTEREST

Authors confirm they have no conflict of interest.

REFERENCES

- World Health Organization. [Página web en internet]. 2019 Sep [citado 9 Septiembre 2019]. Disponible en: <http://www.who.int/mediacentre/factsheets/fs398/en/>
- Fundación Salud Mental España. España. Suicidios 2016. [Página web en internet]. 2019 Sep [citado 9 Septiembre 2019]. 2019 Sep [citado 10 Septiembre 2019]. Available at: <https://www.fsme.es/observatorio-del-suicidio-2016/espaa%C3%B1a-suicidios-2016/>
- Oquendo MA, Sullivan GM, Sudol K, Baca-García E, Stanley BH, Sublette ME, Mann JJ. Toward a biosignature for suicide. *Am J Psychiatry* 2014;171(12):1259-77.
- De Leon J, Baca-García E, Blasco-Fontecilla H. From the Serotonin Model of Suicide to a Mental Pain Model of Suicide. *Psychother Psychosom* 2015;84(6):323-329.
- O'Connor R, Kirtley O. The integrated motivational-volitional model of suicidal behaviour. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 2018;373(1754):20170268.
- Turecki G, Brent DA. Suicide and suicidal behaviour. *The Lancet*. 2016.
- Serafini G, Muzio C, Piccinini G, Flouri E, Ferrigno G, Pompili M, et al. Life adversities and suicidal behavior in young individuals: a systematic review. *European Child and Adolescent Psychiatry*. 2015.
- Liu RT, Miller I. Life events and suicidal ideation and behavior: A systematic review. *Clinical Psychology Review*.
- Chen T, Roberts K. Negative Life Events and Suicide in the National Violent Death Reporting System. *Arch Suicide Res*. 2019 Oct 22:1-15. doi: 10.1080/13811118.2019.1677275. Epub ahead of print. PMID: 31638469.
- Paul E. Proximally-occurring life events and the first transition from suicidal ideation to suicide attempt in adolescents. *J Affect Disord*. 2018 Dec 1;241:499-504. doi: 10.1016/j.jad.2018.08.059. Epub 2018 Aug 14. PMID: 30149338.
- Posner K, Brown GK, Stanley B, et al. The Columbia-Suicide Severity Rating Scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. *Am J Psychiatry*. 2011;168:1266-1277.
- Clasificación Internacional de Trastornos Mentales y del Comportamiento (CIE-10): Descripciones Clínicas y Pautas para el Diagnóstico. Ginebra: Organización Mundial de la Salud; 1992.
- Brugha T, Bebbington P, Tennant C, Hurry J. The List of Threatening Experiences: a subset of 12 life event categories with considerable long-term contextual threat. *Psychol Med* 1985;15(1):189-194.
- Ásgeirsdóttir H, Valdimarsdóttir U, Þorsteinsdóttir Þ et al. The association between different traumatic life events and suicidality. *Eur J Psychotraumatol* 2018;9(1):1510279.
- Tang F, Xue F, Qin P. The interplay of stressful life events and coping skills on risk for suicidal behavior among youth students in contemporary China: a large scale cross-sectional study. *BMC Psychiatry*. 2015;15(1).
- Stewart J, Shields G, Esposito E, Cosby E, Allen N, Slavich G et al. Life Stress and Suicide in Adolescents. *Journal of Abnormal Child Psychology*. 2019;47(10):1707-1722.
- Heikkinen M, Lönnqvist J. Recent Life Events in Elderly Suicide: A Nationwide Study in Finland. *Int Psychogeriatr* 1995;7(2):287-300.
- Srivastava NK, Sahoo RN, Ghotekar LH, SrihariDutta, Danabalan M, Dutta TK y Das A. Risk Factors Associated with Attempted Suicide: A Case Control Study. *Indian J Psychiatry* 2004;46(1), 33-38.
- Irigoyen M, Porrás-Segovia A, Galván L et al. Predictors of re-attempt in a cohort of suicide attempters: A survival analysis. *J Affect Disord* 2019;247:20-28.
- Bagge C, Littlefield A, Conner K, Schumacher J, Lee H. Near-term predictors of the intensity of suicidal ideation: An examination of the 24h prior to a recent suicide attempt. *J Affect Disord* 2014;165:53-58.
- Osvath P, Vörös V, Fekete S. Life Events and Psychopathology in a Group of Suicide Attempters. *Psychopathol Rev* 2004;37(1):36-40.
- Fjeldsted R, Teasdale T, Jensen M, Erlangsen A. Suicide in Relation to the Experience of Stressful Life Events: A Population-Based Study. *Arch Suicide Res* 2016;21(4):544-555.
- Liu Y, Zhang J. The Impact of Negative Life Events on Attempted Suicide in Rural China. *J Nerv Ment Dis* 2017;1.
- Liu B, Zhang J, Chu J, Qiu H, Jia C, Hennessy D. Negative life events as triggers on suicide attempt in rural China: a case-crossover study. *Psychiatry Res* 2019;276:100-106.
- Sorsdahl K, Stein D, Williams D, Nock M. Associations Between Traumatic Events and Suicidal Behavior in South Africa. *J Nerv Ment Dis* 2011;199(12):928-933.
- Ducasse D, Lopez-Castroman J, Dassa D et al. Exploring the boundaries between borderline personality disorder and suicidal behavior disorder. *Eur Arch Psychiatry Clin Neurosci* 2019.

27. Lutz P, Mechawar N, Turecki G. Neuropathology of suicide: recent findings and future directions. *Mol Psychiatry* 2017;22(10):1395-1412.
28. Hakulinen C, Elovainio M, Pulkki-Råback L, Virtanen M, Kivimäki M, Jokela M. Personality and depressive symptoms: individual participant meta-analysis of 10 cohort studies. *Depress Anxiety*. 2015;32(7):461-470.
29. Porras-Segovia A, Valmisa E, Gutiérrez B, Ruiz I, Rodríguez-Barranco M, Cervilla J. Prevalence and correlates of major depression in Granada, Spain: Results from the GranadSp study. *Int J Soc Psychiatry*. 2018;64(5):450-458.
30. Wedig M, Frankenburg F, Bradford Reich D, Fitzmaurice G, Zanarini M. Predictors of suicide threats in patients with borderline personality disorder over 16 years of prospective follow-up. *Psychiatry Res* 2013;208(3):252-256.
31. Blasco-Fontecilla H, Jaussent I, Beziat S et al. P-12 - Major suicide repeaters: patients addicted to suicidal behaviour? An exploratory study. *Eur Psychiatry* 2012;27:1.
32. Mendez-Bustos P, de Leon-Martinez V, Miret M, Baca-Garcia E, Lopez-Castroman J. Suicide Reattempters. *Harv Rev Psychiatry* 2013;21(6):281-295.
33. Weber A, Michail M, Thompson A, Fiedorowicz J *Psychiatric Emerg. Med Clin North Am* 2017;101(3):553-571.
34. Saini P, Windfuhr K, Pearson A et al. Suicide prevention in primary care: General practitioners' views on service availability. *BMC Res Notes* 2010;3(1).
35. Leahy D, Schaffalitzky E, Saunders J et al. Role of the general practitioner in providing early intervention for youth mental health: a mixed methods investigation. *Early Interv Psychiatry* 2015;12(2):202-216.