

## Intervention strategies in the prevention of suicidal behavior in substance use disorders patients in times of COVID-19

### *Estrategias de intervención en la prevención de comportamiento suicida en pacientes con trastorno por consumo de sustancias en tiempos de COVID-19*

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**S**uicide represents a serious public health problem, due both to its current high prevalence and the lack of implementation of adequate preventive strategies in many countries, including Spain (Sáiz & Bobes, 2014).

It has been estimated that the number of suicide attempts (SA) is approximately 10-20 times higher than that of completed suicides. However, the real size of the problem is underestimated given the underreporting that tends to occur in most countries worldwide (Giner & Guja, 2014).

Having a history of SA is still the best predictor of later completed suicide (Wang, Huang, Lee, Wu & Chen, 2014). The presence of mental disorders is a further key risk factor, with uni- and bipolar depressive disorders and alcohol use disorders the most prevalent in relation to suicidal behaviour (Gómez-Durán, Forti-Buratti, Gutiérrez-López, Belmonte-Ibáñez & Martín-Fumadó, 2016; Zalsman et al., 2016).

The main tool for obtaining a clinical impression of the suicidal risk present at a given moment in a patient is the clinical interview, as recommended by the most up-to-date clinical guidelines, which indicates that screening instruments do not have sufficient predictive power (Working

Group on the Review of Clinical Practice Guidelines for the Prevention and Treatment of Suicidal Behaviour, 2020; Jacobs et al., 2010; Inagaki, Kawashima, Yonemoto & Yamada, 2019; Mann et al., 2005).

The clinical interview aims to detect suicidal risk factors, while contrasting them with protective factors relevant at the time of assessment. Clear knowledge about and identification of such factors are essential in determining the level of risk, remembering that some have a more specific weight than others and that in combination they considerably increase the risk (Hawton & van Heeringen, 2009; Kraemer & Clarke, 1990).

As a consultation and support tool for the clinician, table 1 presents the main risk factors and table 2 the protective factors.

### **Substance use and suicidal behaviour**

Suicide is the main cause of death in people with substance use disorder (Wilcox, Conner & Caine, 2004). It has been estimated that the risk of death by suicide is 10 times higher for alcohol use disorder and 14 times higher for addicts to other substances compared to the general population (Yuodelis-Flores & Ries, 2015).

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Table 1. Main risk factors associated with suicidal behaviour.

Severe risk		Moderate risk	
Sex, age and residence		Sex, age and residence	
Male Rural environment > 65 years old		Female Urban environment > 65 years old	
Mental disorder		Mental disorder	
Major depression	Severe High anxiety Low behavioural inhibition No psychomotor retardation With psychotic features	Major depression	Moderate
		Bipolar disorder	Moderate depressive episode Manic/hypomanic episode Others
		Psychotic disorder	
Bipolar disorder	Episode of major depression With psychotic features Mixed characteristics	Personality disorder	Borderline Antisocial
Psychotic disorder	Acute episode Linked to depression First years of diagnosis Poor treatment adherence	Anxiety disorder	Phobias Panic attacks
		Eating disorders	Anorexia nervosa
		Obsessive-compulsive disorder	
Substance use		Other mental disorders	
Alcohol use disorder	Severe Currently active Linked to mental illness Linked to use of other intoxicants	Substance use	
		Severe substance use disorder	Cannabis Hallucinogens Opioids
		Stimulants (cocaine, amphetamines) Sedatives/hypnotics/ anxiolytics Linked to mental illness	
Previous suicide attempt		Previous suicide attempt	
Number	3 or more	When	6 to 12 months
When	Last 6 months	Method	Medium lethality
Method	High lethality	Suicidal ideation	
Planned	Yes	Weekly frequency	
Suicidal ideation		Socioeconomic/work/education-related	
Daily frequency Linked to suicide attempt		Unemployed/retired Low level of education and culture Depressed social status	
Current suicide attempt		Marital status	
High-lethality method Planned Farewell letter Steps to prevent rescue		Divorced Widower	
Disabling physical illness		Life Events (Precipitating Factors)	
Chronic pain Disease with poor prognosis Loss of mobility		Loss of loved ones Somatic diseases Gender violence Sexual abuse Legal problems	
History		Psychological factors	
Suicide in first-degree relative		Hopelessness Impulsivity	
		History	
		Suicide in second-degree relative	

Table 2. *Main protective factors against suicidal behaviour.*

Personal or specific to subject	Social and environmental
<ul style="list-style-type: none"> <li>• Individual's own attitudes and values</li> <li>• Conflict resolution or problem-solving skills</li> <li>• Presence of cognitive flexibility</li> <li>• Having self-confidence</li> <li>• Skills for personal and interpersonal relationships</li> <li>• Religious beliefs disapproving of suicide</li> <li>• Self-control of impulsivity and anger management</li> </ul>	<ul style="list-style-type: none"> <li>• Having a good family and social support</li> <li>• Social integration</li> <li>• Accessibility to health facilities</li> <li>• Comprehensive, permanent and long-term treatment for patients with mental disorders</li> <li>• Control when acquiring potentially lethal weapons or medications</li> </ul>

Suicide was attempted by 3.4% of men and 4.4% of women with substance use in the 30 days before incorporation into a treatment program (Tiet, Ilgen, Byrnes & Moos, 2006). The presence of a high prevalence of both suicidal ideation and AS at the start of treatment seems to be linked to periods when consumption is out of control, to the presence of social problems in the environment (work, marital, legal, etc.) and with the onset or exacerbation of mental illness (Ross et al., 2005).

Regarding sex, the risk of both AS and completed suicide has been found to be higher in women, unlike the pattern established in the general population where suicide is clearly predominant in men. The psychiatric comorbidities and social maladjustment involved in substance use are considered relevant factors with regard to increased risk in women (Wilcox et al., 2004).

Alcohol use disorders play a prominent role in suicidal behaviour. Not only as a risk but also as a precipitating factor due to the disinhibition and executive dysfunction caused by alcohol intoxication (World Report on Violence and Health, 2002). It has been estimated that alcohol was drunk in 37% of completed suicides, rising to 40% in non-lethal attempts (Wilcox et al., 2004). This represents a 15-fold increase in risk compared to the general population (Beautrais, Collings, Ehrhardt & Henare, 2005).

The use of other substances similarly increases the risk of suicidal behaviour. Compared to the general population, the risk of suicide has been estimated to be 14 to 17 times higher and associated mainly with cognitive impairment, social maladjustment and psychiatric comorbidity (Price, Hemmingsson, Lewis, Zammit & Allebeck, 2009; Tiet et al., 2006; Wilcox et al., 2004).

Moreover, polydrug use naturally increases the risk of suicide. A history of suicide attempts is found in 58% of polydrug patients, and their risk is 17 times greater than that of the general population; in addition, the lethality of overdose, the most frequent suicide method in the addicted population, is on the increase (Wilcox et al., 2004).

The severity of drug use, as well as the number of substances consumed, represent a risk factor of greater impact in the link to AS than the type of substance consumed (Ilgen, Harris, Moos & Tiet, 2007).

In terms of psychiatric comorbidity, the risk increases considerably when another mental disorder is linked to substance use. Depressive disorder stands out as the most harmful association, followed by personality disorder and impulse control disorder (Artenie et al., 2015; Wilcox et al. 2004).

### Intervention in patients with substance use disorder as a prevention method

Current evidence clearly highlights the high prevalence of suicidal behaviour in patients with substance use. The challenge of applying prevention strategies is greater with this patient profile as it is not yet clear which strategy is best suited to reducing the rate of suicide deaths in this population (Goldstone, Bantjes & Dannatt, 2018).

Of the currently available strategies in relation to the prevention of suicidal behaviour, few can show sufficient evidence of ensuring a reduction in the incidence of suicide in the general population. The main strategies demonstrating evidence in prevention at the level of public health and health care were published in 2017 (Zalsman et al., 2017).

Although work is in progress on implementing prevention strategies in the different risk groups, there is a lack of studies on interventions developed in the population of substance-using patients (Goldstone et al., 2018). It would be very useful to have information that can tell us which intervention measures are best applied in this population, or reaffirm that general population strategies are equally efficacious in this profile of patients at risk.

To date, two pilot projects investigating the efficacy of two different interventions in the substance-using population have published results (Esposito-Smythers, Spirito, Uth & LaChance, 2006; Voss et al., 2013). The results show that the benefits of the interventions for this patient profile are fundamentally based on improving adherence, reducing suicidal ideation and facilitating greater capacity for managing moments of anxiety by increasing the ability to seek help. The programs provide the patient with copious information regarding the association of substance use with suicidal behaviours, equipping them with a better

attitude towards such situations and the ability to manage them. Unfortunately, these programs do not appear to be effective in preventing repeated AS.

We therefore find favourable data pointing us towards a feasible and viable model to apply as a prevention strategy, and strongly indicated in this patient profile. Nevertheless, it should be noted that these results must be interpreted with caution since they represent pilot studies with multiple limitations, such as small sample size, the use of unspecific and inadequate psychometric tests recommended for improvement in future studies, and the lack of a control group for comparison. The paucity of studies on the subject invites further analysis and the search for new strategies in this patient profile.

Prevention strategies at three levels (universal, selective and indicated) obtain excellent results in combination, when patients with a substance use diagnosis are placed in the at-risk population group and indicated for intervention. It would be very useful to have resources for use in improving standard treatment in this group of patients, mainly in training health professionals in the three levels of intervention, these being: treatment of substance use, psychiatric comorbidity and prevention of suicidal behaviour. Such treatment would offer a more specific and non-generic intervention (Goldstone et al., 2018).

A considerable proportion of personnel working in addictive behaviour units acknowledge their lack of training regarding intervention with patients at risk of suicide. Adequate training would provide the therapist with knowledge and confidence in working with such patients, leading to improved treatment adherence; on their own, years of experience working in addictive behaviour treatment units do not equate to the capacity to manage the suicidal risk patient (Fruhbaurova & Comtois, 2019).

### **Interview and intervention in patients with suicide risk and substance use disorder**

All intervention must be based on the following psychotherapeutic principles: empathy, collaboration and honesty. In other words, healthcare professionals do not position themselves as guardians of their patient's physical integrity, but rather as professionals concerned about their suffering; while wanting the patient to continue living, they also understand their difficulties and respect the patient's point of view and their decisions, offering help to improve the situation and overcome crises. The healthcare professional must remember that in most cases there will be an ambivalence towards life and death that needs exploring in order to discover and be able to intervene in the factors that determine this ambivalence.

It is advisable to work within clearly established time periods. It is essential that the therapist inform the patient about the legal and care framework in which the interven-

tion takes place and what their obligations are within this framework.

Next, strategies to be used during the psychotherapeutic intervention are outlined:

#### ***Decisional balance***

A very useful activity to carry out with the patient is a decisional balance on the reasons for living versus the reasons for dying. It must be done collaboratively and honestly without the therapist clearly positioning himself in favour of reasons to live.

#### ***Crisis stabilization/intervention plan***

The crisis stabilization/intervention plan is drawn up in consultation with the patient, who should always carry it with them in the form of a card or on the mobile phone. The elements of the plan should be simple and easy to apply. At the very least, it should include the following items:

- warning signs to activate the plan
- ways to reduce access to lethal means
- distraction and self-regulation activities for periods of crisis
- people to contact during periods of crisis: they must be available and know that they have been assigned this role in order to respond empathically to the patient's call
- emergency telephone numbers to contact

#### ***Increase activities that involve experiencing positive emotions***

Increasing the level of activity and directing it towards emotionally positive experiences is a fundamental behavioural technique to be applied with this type of patient.

#### ***Improve emotional regulation strategies***

Training the patient in relaxation techniques, meditation/mindfulness, imagery, and encouraging positive strategies already used by the patient to self-regulate emotionally is a task of great importance.

#### ***Increase the patient's social support***

Drawing up a list of people who can be supportive outside the therapeutic framework to a greater or lesser degree is another highly recommended strategy.

#### ***Increase support from other health and social services by improving adherence to them***

The previously mentioned risk factors may be addressed and mitigated by other health and social services. A list of possible help resources should be established collaboratively with the patient and strategies to improve adherence to these resources should be proposed.

### **Improve the ability to handle problematic thoughts or ideas**

Preparing notes or messages on the mobile phone with thoughts that counteract the suicidal ideation of the patient is very useful. Such notes must be simple and easily accessible.

## **Impact of the COVID-19 pandemic on substance use**

We are currently in a pandemic situation due to COVID-19. Multiple publications have made negative forecasts and warn the health authorities of the possible increase in both the rates of SA and completed suicides due to the increase in risk factors such as unemployment, the economic crisis, social conflicts, the increase in anxiety and depression levels, reluctance to seek help in health centres given difficulties in accessing them, the increase in alcohol use and finally the ease of access to lethal means (bleach, disinfectants) (Gunnell et al., 2020).

Data obtained in previous natural disasters and pandemics show a reduction in the momentary suicide rate followed by an immediate increase after the event, which supports the forecasts and warnings (Wasserman, Iosue, Wuestefeld & Carli, 2020).

The population with substance use disorders represents a vulnerable group at risk of infection due to clinical, psychopathological and psychosocial conditions (Ornell et al., 2020). It is expected that quarantine and social isolation may have negative effects in terms of increased consumption and a higher relapse rate in individuals with long periods of abstinence, focusing mainly on alcohol use (Kahil et al., 2021). On the other hand, there are data that show how drinking and/or smoking are strategies used by the general population in trying to cope with the consequences of the pandemic (Martínez-Cao et al., 2021).

There is a bidirectional interaction between COVID-19 and addictions that carries a threat and a greater impact on public health. Government and legislative bodies must act to guarantee social security in this group of patients, maintaining availability and access to all treatment options, linked to the provision of clear, accessible and easily understood information in relation to preventive measures against COVID-19 in these patient groups (Dubey et al., 2020; García-Álvarez, Fuente-Tomás, Sáiz, García-Portilla & Bobes, 2020; Mallet, Dubertret & Le Strat, 2021). Strengthening mental health is recommended as a priority in order to manage the after-effects of the pandemic.

## **Conclusions**

While work is being done on the prevention of SA in the general population and in mental health patients, efforts in the population with substance use disorder have been

little promoted. The evidence clearly shows the high prevalence of suicidal behaviour in these patients, with substance use being considered an indirect alarm signal requiring patient monitoring.

The creation of intervention protocols in patients attending health care units is therefore recommended, beginning with systematic screening to assess the risk of suicidal behaviour and the development of intervention strategies in these patients in order to achieve reductions in the rates of both SA and completed suicide, with a key focus on highlighting and evaluating the level of social exclusion, psychiatric comorbidities and levels of hopelessness presented by the patient.

General therapeutic interventions for the treatment of suicidal behaviour may be suitable for this population, although research proving their effectiveness has been limited to date. It is recommended that healthcare personnel who care for patients with substance use disorders be familiar with and possess the ability to identify patients at risk; it is essential to detect risk factors and warning signs in the patients they treat. It is worth underlining the importance of the treatment of psychiatric comorbidity as a therapeutic tool in reducing suicide risk in these patients.

This is not intended to downplay the role of suicidal behaviour intervention units, which are greatly needed, but to stress and highlight the fundamental contribution that addiction treatment units can make in reducing the prevalence of such behaviours.

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## **Conflict of interests**

The authors declare no conflict of interest.

## **References**

- Artenie, A. A., Bruneau, J., Zang, G., Lespérance, F., Renaud, J., Tremblay, J. & Jutras-Aswad, D. (2015). Associations of substance use patterns with attempted suicide among persons who inject drugs: Can distinct use patterns play a role? *Drug and Alcohol Dependence*, 147, 208-214. doi:10.1016/j.drugalcdep.2014.11.011.
- Beautrais, A. L., Collings, S. C. D., Ehrhardt, P. & Henare, K. (2005). *Suicide Prevention: A review of evidence of risk and protective factors, and points of effective intervention*. Wellington: Ministry of Health.
- Dubey, M. J., Ghosh, R., Chatterjee, S., Biswas, P., Chatterjee, S. & Dubey, S. (2020). COVID-19 and addiction. *Dia-*

- betes & Metabolic Syndrome, 14, 817-823. doi:10.1016/j.dsx.2020.06.008.
- Esposito-Smythers, C., Spirito, A., Uth, R. & LaChance, H. (2006). Cognitive behavioral treatment for suicidal alcohol abusing adolescents: Development and pilot testing. *American Journal on Addictions*, 15, 126-130.
- Fruhbaurova, M. & Comtois, K. A. (2019). Addiction counselors and suicide: Education and experience do not improve suicide knowledge, beliefs, or confidence in treating suicidal clients. *Journal of Substance Abuse Treatment*, 106, 29-34. doi:10.1016/j.jsat.2019.08.012.
- García-Álvarez, L., Fuente-Tomás, L. D. la, Sáiz, P. A., García-Portilla, M. P. & Bobes, J. (2020). Will changes in alcohol and tobacco use be seen during the COVID-19 lockdown? *Adicciones*, 32, 85-89. doi:10.20882/adicciones.1546.
- Giner, L. & Guija, J. A. (2014). Número de suicidios en España: Diferencias entre los datos del Instituto Nacional de Estadística y los aportados por los Institutos de Medicina Legal. *Revista de Psiquiatría y Salud Mental*, 7, 139-146. doi:10.1016/j.rpsm.2014.01.002.
- Goldstone, D., Bantjes, J. & Dannatt, L. (2018). Mental health care providers' suggestions for suicide prevention among people with substance use disorders in South Africa: A qualitative study. *Substance Abuse Treatment, Prevention, and Policy*, 13, 47. doi:10.1186/s13011-018-0185-y.
- Gómez-Durán, E. L., Forti-Buratti, M. A., Gutiérrez-López, B., Belmonte-Ibáñez, A. & Martín-Fumadó, C. (2016). Trastornos psiquiátricos en los casos de suicidio consumado en un área hospitalaria entre 2007-2010. *Psiquiatría y Salud Mental*, 9, 31-38. doi:10.1016/j.rpsm.2014.02.001.
- Grupo de Trabajo de revisión de la Guía de Práctica Clínica de prevención y tratamiento de la conducta suicida (2020). Revisión de la Guía de Práctica Clínica de Prevención y Tratamiento de la Conducta Suicida (2012) del Programa de GPC en el SNS. Ministerio de Sanidad. Agencia Gallega para la Gestión del Conocimiento en Salud (ACIS), Unidad de Asesoramiento Científico-Técnico, Avalia-t. Guías de Práctica Clínica en el SNS.
- Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N. & COVID-19 Suicide Prevention Research Collaboration (2020). Suicide risk and prevention during the COVID-19 pandemic. *Lancet Psychiatry*, 7, 468-471. doi:10.1016/S2215-0366(20)30171-1.
- Hawton, K. & van Heeringen, K. (2009). Suicide. *Lancet*, 373, 1372-1381. doi:10.1016/S0140-6736(09)60372-X.
- Ilgen, M. A., Harris, A. H. S., Moos, R. H. & Tiet, Q. Q. (2007). Predictors of a suicide attempt one year after entry into substance use disorder treatment. *Alcoholism, Clinical and Experimental Research*, 31, 635-642. doi:10.1111/j.1530-0277.2007.00348.x.
- Inagaki, M., Kawashima, Y., Yonemoto, N. & Yamada, M. (2019). Active contact and follow-up interventions to prevent repeat suicide attempts during high-risk periods among patients admitted to emergency departments for suicidal behavior: A systematic review and meta-analysis. *BMC Psychiatry*, 19, 44. doi:10.1186/s12888-019-2017-7.
- Jacobs, D. G., Baldessarini, R. J., Conwell, Y., Fawcett, J. A., Horton, L., Meltzer, H.,... Simon, R. I. (2010). Assessment and treatment of patients with suicidal behaviors. *APA Practice Guidelines*.1-183.
- Kahil, K., Cheaito, M. A., El Hayek, R., Nofal, M., El Halabi, S., Kudva, K. G.,... El Hayek, S. (2021). Suicide during COVID-19 and other major international respiratory outbreaks: A systematic review. *Asian Journal of Psychiatry*, 56, 102509. doi:10.1016/j.ajp.2020.102509.
- Kraemer, G. W. & Clarke, A. S. (1990). The behavioral neurobiology of self-injurious behavior in rhesus monkeys. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, 14, 141-168. doi:10.1016/0278-5846(90)90092-U.
- Mallet, J., Dubertret, C. & Le Strat, Y. (2021). Addictions in the COVID-19 era: Current evidence, future perspectives a comprehensive review. *Progress in Neuro-psychopharmacology & Biological Psychiatry*, 106, 110070. doi:10.1016/j.pnpbp.2020.110070.
- Mann, J. J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., Haas, A.,... Hendin, H. (2005). Suicide prevention strategies: A systematic review. *JAMA*, 294, 2064-2074. doi:10.1001/jama.294.16.2064.
- Martínez-Cao, C., de la Fuente-Tomás, L., Menéndez-Miranda, I., Velasco, Á., Zurrón-Madera, P., García-Álvarez, L.,... Bobes, J. (2021). Factors associated with alcohol and tobacco consumption as a coping strategy to deal with the coronavirus disease (COVID-19) pandemic and lockdown in Spain. *Addictive Behaviors*, 121, 107003. doi:10.1016/j.addbeh.2021.107003.
- Ornell, F., Moura, H. F., Scherer, J. N., Pechansky, F., Kessler, F. & von Diemen, L. (2020). The COVID-19 pandemic and its impact on substance use: Implications for prevention and treatment. *Psychiatry Research*, 289, 113096. doi:10.1016/j.psychres.2020.113096.
- Price, C., Hemmingsson, T., Lewis, G., Zammit, S. & Allebeck, P. (2009). Cannabis and suicide: Longitudinal study. *British Journal of Psychiatry*, 195, 492-497. doi:10.1192/bjp.bp.109.065227.
- Ross, J., Teesson, M., Darke, S., Lynskey, M., Ali, R., Ritter, A. & Cooke, R. (2005). The characteristics of heroin users entering treatment: Findings from the Australian treatment outcome study (ATOS). *Drug and Alcohol Review*, 24, 411-418. doi:10.1080/09595230500286039.
- Sáiz, P. & Bobes, J. (2014). Suicide prevention in Spain: An uncovered clinical need. *Revista de Psiquiatría y Salud Mental*, 7, 1-4. doi:10.1016/j.rpsm.2014.01.003.
- Tiet, Q. Q., Ilgen, M. A., Byrnes, H. F. & Moos, R. H. (2006). Suicide attempts among substance use disorder patients:

- An initial step toward a decision tree for suicide management. *Alcoholism: Clinical and Experimental Research*, 30, 998–1005. doi:10.1111/j.1530-0277.2006.00114.x.
- Voss, W. D., Kaufman, E., O'Connor, S. S., Comtois, K. A., Conner, K. R. & Ries, R. K. (2013). Preventing addiction related suicide: A pilot study. *Journal of Substance Abuse Treatment*, 44, 565-569. doi:10.1016/j.jsat.2012.10.006.
- Wang, L. J., Huang, Y. C., Lee, S. Y., Wu, Y. W. & Chen, C. K. (2014). Switching suicide methods as a predictor of completed suicide in individuals with repeated self-harm: A community cohort study in northern Taiwan. *Australian & New Zealand Journal of Psychiatry*, 49, 65-73. doi:10.1177/0004867414553951.
- Wasserman, D., Iosue, M., Wuestefeld, A. & Carli, V. (2020). Adaptation of evidence-based suicide prevention strategies during and after the COVID-19 pandemic. *World Psychiatry*, 19, 294-306. doi:10.1002/wps.20801.
- Wilcox, H. C., Conner, K. R. & Caine, E. D. (2004). Association of alcohol and drug use disorders and completed suicide: An empirical review of cohort studies. *Drug and Alcohol Dependence*, 76, 11-19. doi:10.1016/j.drugalcdep.2004.08.003.
- World Report on Violence and Health. (2002) (Geneva: WHO). Retrieved at <http://whqlibdoc.who.int/publications/2002/9241545615chap7eng>.
- Yuodelis-Flores, C. y Ries, R. K. (2015). Addiction and suicide: A review. *American Journal on Addictions*, 24, 98-104. doi:10.1111/ajad.12185.
- Zalsman, G., Hawton, K., Wasserman, D., Heeringen, K. Van, Arensman, E., Sarchiapone, M.,... Zohar, J. (2016). Suicide prevention strategies revisited: 10-year systematic. *Lancet Psychiatry*, 3, 646-659. doi:10.1016/S2215-0366(16)30030-X.
- Zalsman, G., Hawton, K., Wasserman, D., Heeringen, K. Van, Arensman, E., Sarchiapone, M.,... Zohar, J. (2017). Evidence-based national suicide prevention taskforce in Europe: A consensus position paper. *European Neuropsychopharmacology*, 27, 418-421. doi:10.1016/j.euroneuro.2017.01.012.

