

Peer-reviewed academic journal

**Innovative Issues and Approaches in
Social Sciences**

IIASS – VOL. 11, NO. 1, JANUAR 2018

Innovative Issues and Approaches in Social Sciences

IIASS is a double blind peer review academic journal published 3 times yearly (January, May, September) covering different social sciences: political science, sociology, economy, public administration, law, management, communication science, psychology and education.

| 2

IIASS has started as a Sldip – Slovenian Association for Innovative Political Science journal and is now being published in the name of CEOs d.o.o. by Založba Vega (publishing house).

Typeset

This journal was typeset in 11 pt. Arial, Italic, Bold, and Bold Italic; the headlines were typeset in 14 pt. Arial, Bold

Abstracting and Indexing services

COBISS, International Political Science Abstracts, CSA Worldwide Political Science Abstracts, CSA Sociological Abstracts, PAIS International, DOAJ.

Publication Data:

CEOs d.o.o.

Innovative issues and approaches in social sciences

ISSN 1855-0541

Additional information: www.iiass.com

NATURE OF THE LAST CONTACT WITH A MEDICAL DOCTOR BEFORE SUICIDE

Urša Mars Bitenc¹, Lara Pirc², Petra Mesec Rodi³, Vita Poštuvan⁴,
Diego De Leo⁵

| 23

Abstract

A relevant number of suicide decedents visit medical doctors (MDs) in a short period before death. This study aimed to learn about MDs' attitudes towards suicide prevention, their previous education on suicide, the experience with suicide, and eventually the nature of the last visit with a patient that died by suicide. 159 Slovenian MDs participated in an online survey covering previously mentioned topics. More than a third of MDs have never been trained on suicide prevention and reported lack of knowledge in this area. More than half experienced suicide of a patient or close one. During the last contact before suicide, MDs frequently noticed symptoms of mental health problems, hopelessness, sleep problems, somatic pain and suicidal ideation. More seldom they observed stocking pills, giving away values, gaining access to firearms, and changing a will. At the time of the last visit, main diagnoses were depression (54.5%), schizophrenia (22.7%), bipolar disorder (12.5%), alcohol use disorder (9.6%), and dementia (4.5%). To improve risk assessment and suicide prevention in health-care settings, a specific training would be a highly desirable option for educating MD's.

Keywords: suicide prevention; professional training; medical doctors; last contact

DOI: <http://dx.doi.org/10.12959/issn.1855-0541.IIASS-2018-no1-art2>

¹ Asst. Urša Mars Bitenc, BSc psychology is a Ph.D student at the University of Ljubljana and a research assistant at the University of Primorska, Andrej Marušič Institute, Slovene Centre for Suicide Research and Faculty of Mathematics Natural Sciences and Information Technologies, Department of Psychology, Koper, Slovenia. E-mail [ursa.mars\(at\)upr.si](mailto:ursa.mars(at)upr.si) (corresponding author)

² Lara Pirc, MSc (The Kingdom of the Netherlands) is a psychologist at The Counselling Centre for Children, Adolescents and Parents Ljubljana, Slovenia

³ MD Petra Mesec Rodi is a medical doctor at Škofja Loka Health Centre, Slovenia

⁴ PhD Vita Poštuvan is deputy head of Slovene Centre for Suicide Research at Andrej Marušič Institute, and deputy head of Department of Psychology at Faculty of Mathematics Natural Sciences and Information Technologies, University of Primorska Koper, Slovenia

⁵ PhD, MD Diego De Leo is head of Slovene Centre for Suicide Research, Andrej Marušič Institute, and head of Department of Psychology at Faculty of Mathematics Natural Sciences and Information Technologies, University of Primorska, Koper, Slovenia

Introduction

Suicide is a serious public health problem (Marušič & Temnik, 2009) taking close to 800,000 lives annually worldwide (WHO, 2014). Every suicide has long-lasting effects on the people left behind, impacting not only families but also communities and entire countries (Poštuvan, 2014). Although an encouraging decrease in the suicide rate was observed in the last decade, Slovenia is still among the countries with the highest suicide rates, which were about 20 per 100,000 in recent years (National Institute of Public Health, Statistical Office RS, 2017). Suicide is preventable; however, we need targeted, sustainable, and focused interventions (WHO, 2014; Mann et al. 2005). One of the most important strategies is to incorporate suicide prevention into the health-care system by educating medical staff for early identification and efficient management of suicidal patients (WHO, 2014).

Educating gatekeepers on suicide prevention

Suicide risk assessment is difficult (Saini et al., 2014); however, education and training of gatekeepers such as health professionals, especially general practitioners (GPs), on suicide are associated with improved confidence in the assessment of suicidality and management of suicide risk (Delgadillo et al., 2014). This may reduce the incidence of fatalities (Isaac et al., 2009). Understanding risk factors for suicide can often contribute to the effective treatment of mental disorders. A 3.5-fold increase in the use of antidepressants in Sweden has been associated to a decrease in suicide rates (Isacsson, 2000) giving grounds to the belief that increased recognition and treatment of depression in primary care could reduce suicide rates. A Slovenian study on the effects of a training program on recognition and management of depression and suicide risk evaluation/assessment (Roškar et al., 2010) noted an increase in antidepressants prescriptions after GPs' education. However; the study failed to evidence statistically significant differences in suicide rates among regions where physicians received the training and those where there were no educational programs. Nevertheless, it is believed that educating GPs on suicidal behaviour and risk identification could result in better risk assessment and management (Saini et al., 2014; Mann et al., 2005; van der Feltz-Cornelis et al., 2011).

Attitudes of health-care professionals about suicide

Education can also affect changing medical staff's attitudes towards a specific pathology or behaviour. For example, educational workshops on depression changed nurses' attitudes towards depression (Poštuvan, Bečaj, & Marušič, 2007), and a suicide prevention training program for psychiatric staff resulted in increased understanding and willingness to

care in addition to better accuracy of suicide risk assessment (Samuelsson & Åsberg, 2002).

Feldman and colleagues (2007) explored physicians' factors that determine the tendency to assess suicide risk in patients with symptoms of depression. They noted that suicide inquiries were not related to physician's speciality, gender, communication style, or perceived barriers to or confidence in treating depression. There might be additional albeit unspecified physician's factors that influence the tendency to explore suicide risk in patients; these are probably related to unmeasured attitudes, traits, or knowledge (Feldman et al., 2007). Knowledge of the suicide field, supervision, and perceived competence, in addition to female gender and older age, seem to correlate with increased empathy and positive attitudes about suicide and its prevention (Samuelsson, Åsberg, & Gustavsson, 1997; Norheim, Grimholt, & Ekeberg, 2013). Moreover, there are differences in attitudes between personnel working in different settings, which might be explained by differences in the frequency of contact with suicidal prone patients, with more frequent exposure being associated with more positive attitudes (Samuelsson et al., 1997).

Last contact before suicide

Majority of people who died by suicide visited a medical doctor in the last year or month prior death, suggesting that they may play an important role in suicide prevention (Pirkis & Burgess, 1998; Andersen et al., 2000; Luoma, Martin, & Pearson, 2002).

A review of 24 studies showed that up to 83% of those who died by suicide visited a GP within a year and up to 20% within a week prior to suicide (Pirkis & Burgess, 1998). Furthermore, contact with GPs was more common than with mental health professionals (e.g., psychiatrists) in the month and year leading up to suicide. Another, more recent review of 40 studies revealed that while only one-third of suicide victims had contact with mental health services in the year preceding death, more than three-quarters had contact with primary care services (Luoma et al., 2002). Further, older adults (55 years and above) and women had higher rates of primary care contact than younger adults and men in the month before death, while younger adults had higher rates of mental health contact than older adults within the year of death (Luoma et al., 2002). These findings imply that suicide prevention through primary care facilities is associated with a higher number of attendances from older adults and women (Luoma et al., 2002). In a Slovenian sample, 39% of suicide decedents, visited a GP one month prior to death (28% due to mental health problems), compared to 21% in the control group (Mesec

Rodi, Roškar, & Marušič, 2010). On the other hand, an Australian study did not find a statistically significant difference between people who died by suicide and those who died by sudden deaths regarding medical contacts within three months prior to death (De Leo, Draper, Snowdon, & Kőlves 2013). There was a significant difference in contacts with mental health professionals, with suicide decedents visiting a mental health facility more often than controls.

While the communication of suicide intent in the context of the last clinical contact with a health professional was found to occur in 22-45% of cases, it was reported to happen with GPs in only 11% of cases (Isometsä et al., 1995; Obafunwa & Busuttil, 1994). Furthermore, men appeared less likely to communicate suicide intent than women (Isometsä et al., 1995). Suicide-associated factors that were more common in suicide decedents than in controls were: psychiatric illness, deteriorating health, and loss of a spouse (Obafunwa & Busuttil, 1994). Half of suicide decedents died within 24 hours from consultation; of these, 51% overdosed on drugs, mostly the prescribed ones, which were also the main reason for visiting a medical doctor (Obafunwa & Busuttil, 1994).

Aims of the study

The aim of this study was to learn more about medical doctors' attitudes towards suicide prevention, their education about suicide, and the experiences they have with a suicide of their patients. Our main interest was to examine the nature of the last contact with the patient before death. The results of this study may provide indications for the development of prevention activities focused on medical doctors as gatekeepers.

Methods

Sample

This study included a convenient sample of 159 Slovenian medical doctors (MDs) from various medical fields. Most of the participants were female (71.1%); some did not want to disclose information about their gender (1.9%). At the time of the study, participants worked in all Slovenian regions, with distribution as follows: Central Slovenia (32.1%), Podravska (18.9%), Savinjska (9.4%), South-east (8.8%), Gorenjska (8.2%), Goriška (8.2%), Pomurska (6.3%), and Obalno-kraška region (5.0%); Koroška, Zasavska, Notranjsko-kraška, and Spodnjeposavska region were represented by less than 5% of participants. Participants worked in the fields of family medicine (34.6%), psychiatry (11.9%), paediatrics (7.5%), and internal medicine (7.5%). Other specialities were

represented in smaller extent (less than 4% each). Their work experience ranged from 0.5 to 45 years ($M=16.6$, $SD=12.0$).

Instruments

We constructed a short online survey covering the following areas:

- Education on suicide-related topics (“Have you ever participated in educational courses on suicide? How would you rate the education on suicide presented to you during years of study?” assessed on a 5-point Likert scale, from 1=insufficient to 5=sufficient)
- Professional and personal experiences with suicide (“Have you experienced a suicide of a patient? Do you have personal experiences with suicide?”)
- Attitudes towards suicide prevention and euthanasia (“Do you believe in suicide prevention? Do you believe that people with terminal illness have the right to freely choose the way of dying?”)
- Last contact with the patient before suicide (“Which of the following signs and symptoms have you noticed during the last visit before suicide?” The designated answers were: trouble sleeping, physical pain, anxiety symptoms, depression symptoms, other mental health-related problems, suicide ideation, giving away their belongings, the intention of changing the will, stashing pills, access to firearms, hopelessness, other. “Have a patient who died by suicide had a diagnosis of mental disorder?”)
- General information (region of work, years of work experience, gender, field of work – speciality).

The survey ended with an open-ended question where participants were invited to write whatever they wished regarding the topic and their experiences with suicide.

Procedure

We collected the data in collaboration with the Medical Chamber of Slovenia, the central national association with an obligatory membership of all medical doctors in practice, covering about 5,500 members. Link to the online survey was disseminated in their monthly newsletter, which is distributed to all the members. The survey took five minutes to answer, the online form was open for two months, and then data were analysed in IBM SPSS.

Results

Education on suicide

More than a third of our sample (36.5%) has never been trained on the topic of suicide. Even during their studies, they felt that they were only partially informed about the topic of suicide ($M =2.7$; $SD=1.1$; assessed on a 5-point Likert scale, from 1=insufficient to 5=sufficient).

Furthermore, in the open question section, participants expressed the desire for some form of organised professional training on the topic of suicidality (lectures, interactive workshops). Some participants even expressed the opinion that those cases of suicide that happened to their patients or a close person could have been prevented if better knowledge of suicide and management skills were previously made available to them.

Experience with suicidal behaviour of a patient or close one

More than half of the participants already experienced the loss of a patient due to suicide (55.3%). They mostly reported the experience of one (13.2%) or two such cases (11.9%). A small percentage (7.4%) of those with experience of a patient's suicide reported ten or more such cases. Those MDs mostly worked in family medicine or psychiatry. Half of participating MDs (49.7%) also had personal experience of suicide or suicidal behaviour either in an acquaintance, friend, family member, or their own.

Attitudes towards suicide prevention

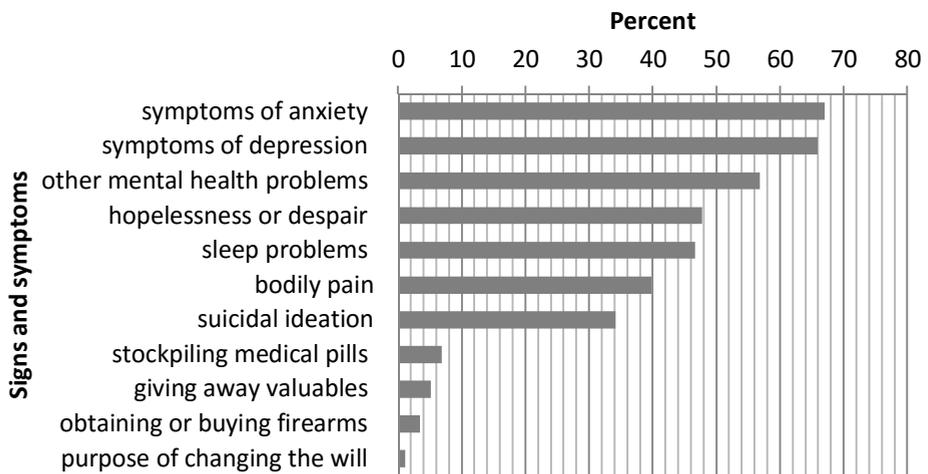
Most MDs believe that suicide is preventable (89.9%). There were no statistically significant differences in attitudes towards suicide prevention between groups with and without the experience of a patient's suicide ($\chi^2(1, N=156) = 2.72, p=0.10, \Phi=0.13, OR=0.3$). Furthermore, no significant differences in attitudes were observed among MDs with a personal experience of suicide and those without it ($\chi^2(1, N=155)=0.80, p =0.37, \Phi=0.07, OR=1.7$). There seemed to be a connection between attitudes towards suicide prevention and euthanasia: 92.7% of the MDs that defended the right of euthanasia also hold the opinion that suicide is preventable. There were also differences (calculated by Kruskal-Wallis H test $H(2)=10.12; p=0.006$) in years of work experiences among those who believe in suicide prevention ($Mdn=11.00; N=143$), those who do not ($Mdn=23.00; N=13$), and those who do not want to disclose this information ($Mdn=36.00; N=3$). Post-hoc Mann-Whitney tests with Bonferroni adjustments further revealed statistically significant differences in years of work experiences between those who believe in suicide prevention and those who do not want to disclose this information ($U=37; p=0.034; r=-0.20$). Using Cohen's (Cohen, 1988) criteria, this finding represents a small-to-moderate effect size. No other statistically significant differences were observed between the two groups.

Last contact before suicide

Symptoms and behaviour at the time of patient’s last visit

MDs with an experience of a patient’s suicide noticed symptoms of anxiety, depression and other mental health problems, hopelessness, sleep problems, bodily pain, and suicidal ideation at the last visit more frequently than other warning signs, such as stockpiling drugs, giving away valuables, obtaining firearms, or intending to change the will (Figure 1).

Figure 1. Warning signs and symptoms noticed at the last visit before the suicide of a patient.



Source: Authors’ work.

Participants also listed other signs they observed at the last contact before suicide in an open question section, such as exhaustion after years of chronic illness, sleepiness, agitation (restlessness, anxiety), closing up, taciturnity, avoiding contacts and shutting out the relatives, increased religiosity, increased risky behaviours, care for demented partner, poor school performance, serenity, tranquillity, desire to prolong the sick leave, limited working ability, desire to have a conversation with the MD, alcohol abuse, disrupted cognition, and jealousy.

Diagnosis of mental illness

During the last visit before suicide more than half of the patients had a diagnosis of depression (54.5%), while diagnoses of schizophrenia (22.7%), bipolar disorder (12.5%), and dementia (4.5%) were less frequent. The MDs also indicated the presence of other mental illness diagnoses, such as alcohol use disorder (9.6%), personality and

behavioural disorders, mental disabilities, anorexia nervosa, stress-related disorders, generalised anxiety disorder, epilepsy, and acute psychosis in remission.

Discussion

More than a third of our participants have never participated in training courses about suicide-related topics, and their assessment of the knowledge gained during their academic studies is only moderately sufficient. Patients often choose different medical professionals as their confidants, not only mental health professionals (De Leo et al., 2013); therefore education of all medical professions is necessary for effective suicide risk assessment and intervention.

The majority of MDs that had several experiences of patient suicide work in family medicine and psychiatry; however, it should be noted that they were strongly represented in our sample. Nevertheless, our results are in line with previous research, which shows that people tend to visit mental health professionals before suicide more often than people who die from other causes (De Leo et al., 2013).

Another research question regarded beliefs about suicide prevention. Majority of our sample believe that suicide is preventable, while ten percent of medical doctors do not believe that suicide is preventable or did not disclose this information. We found no correlation between personal or professional experience with suicide and beliefs about suicide prevention. Furthermore, medical doctors who do not believe in suicide prevention or did not want to disclose their beliefs have more work experience than their colleagues who believe suicide is preventable. These findings offer us at least two possible explanations: first, it seems that (more) experienced MDs have concluded that not all suicides can be prevented, maybe also due to the unsuccessful management of suicidal patients. Second, younger doctors tend to be more in touch with latest research findings and guidelines and are also more familiar with professional stances on the topic. Nevertheless, a belief that suicide is not preventable is one of the most common myths, which can be harmful, especially within the medical profession; therefore, additional awareness and training are at necessary.

The correlation between preventability of suicide and the right to die if terminally ill can be puzzling. We might speculate that junior doctors are also more open-minded than their older colleagues; however, a more in-depth examination of this aspect would require more targeted research than the one here presented.

During the last contact with a patient before suicide, MDs frequently noticed symptoms of mental health problems (mostly anxiety and depression), hopelessness, sleep problems, somatic pain, and suicidal ideation. These signs are among the most frequent signs of distress. Stocking pills, giving away values, gaining access to firearms and changing testamentary will were less frequently observed, which is understandable, given that these behavioural signs are usually not observable by MDs, if not explicitly checked with the patient. These results also imply that MDs primarily focus on somatic and psychiatric symptoms and consequently they more actively inquire about these symptoms, while some other important risk factors might remain unchecked. Such symptomatic, as opposed to the holistic approach, represents an obstacle to an effective suicide risk assessment in medical services. Time constraints may easily contribute to this habit. This also implies a historically predominant bio-medical model of illness where the focus is on “repairing” the broken parts of the patient’s body or mind, compared to alternative bio-psycho-social model which tries to include broader perspectives of person’s life into account (Morrison & Bennett, 2009). Also whether the mentioned warning signs are in fact the most prominent and most common in suicidal patients or are just more easily noticed by MDs remains an unanswered question.

With regard to suicidal method, firearms and drug overdoses are not as common in Slovenia (National Institute of Public Health, Statistical Office RS, 2017) compared to some other countries (Ajdacic-Gross et al., 2008). Therefore it was expected that factors facilitating the choice of these methods would be observed less frequently. Additional reported symptoms from the last contact could be divided into three overall categories: somatic problems (exhaustion after prolonged illness, agitation, sleepiness); interpersonal and social factors (closing up, avoiding contacts, care for demented partner, limited working ability, poor school performance, desire to prolong the sick leave, desire to talk to MDs), and intrapersonal changes (increased religiosity, increased risky behaviour, serenity, tranquillity, jealousy).

Most frequent diagnoses of mental illness among the patients at the time of the last contact were depression, schizophrenia, bipolar disorder, alcoholism, and dementia, which - to some extent complies with recent findings (Draper, Snowdon, & Wyder, 2008).

Finally, factors that contribute to detecting suicide risk not only relate to MDs’ characteristics and screening approach, but also to patients’ characteristic (Feldman et al., 2007). Suicide intent often remains unnoticed and under-investigated, especially in non-psychiatric settings;

moreover, the patients who directly communicate their suicide intent more likely get proper treatment, whereas patients who do not want to unveil it or are unable to do so, are more likely to die by suicide (Isometsä et al., 1995). Furthermore, the literature demonstrates that MDs more frequently ask about suicidality when patients appear to be depressed or in need of antidepressant treatment (Feldman et al., 2007; Bajaj et al., 2008). This means that many clinical groups at risk, such as patients with a history of drug abuse or self-harm patients with personality disorders or psychotic disorders, may go unnoticed. Specific education of MDs on the incidence of suicide within specific clinical populations may raise awareness and therefore improve identification of suicide intent in all the populations at risk.

Clinical implications

As everywhere in the world, also in Slovenia the majority of suicide deaths are of men (National Institute of Public Health, Statistical Office RS, 2017). Research shows that men are less likely to contact MDs before death (Luoma et al., 2002) so one of the possible intervention strategies could be encouraging them to talk to a trusted health professional if they are in distress or notice some of the warning signs in their loved ones. Keeping in mind that people with a good social network are already more likely to get help, those with no significant social support are the ones who need our attention. One of the possible suicide prevention activities could be broadening the education to other health professionals such as nurses. In the last few years, there has been a new approach introduced in Slovenia: systematic check-up exams are performed on patients every five years after they turn 30 at the reference ambulatory by registered nurses. In performing this operation, their clinical timing will also include checking for depression.

Limitations

Due to the use of retrospective measures, it is possible that there was an effect of recall bias on MDs' observations of the symptoms at the last visit. It might be the case that more common and visible or more conspicuous symptoms were recalled more easily, and thus reported more frequently. To determine significant risk factors for suicide in patients on their final visit, a control group and more rigorous research design would be vital. The choice of a convenience sample obviously represents a limitation. MDs were invited to participate in the study via e-newsletter. It is possible that only those who are interested in the subject read the invitation and responded to it, leading to a biased sample.

Conclusion

Specific training on recognition of risks factors, warning signs, and suicide risk assessment would be an essential educational option to offer MDs. All medical professions are important in suicide prevention and should not be overlooked when organising prevention activities, such as training and lectures on risk factors and warning signs. Agile but systematic tools for efficient suicide risk assessment would be beneficial since there is a chance that some signs remain overlooked. This study offers us some insight into the topic of the last contact before suicide and MDs' needs regarding suicide education that can be a basis for designing and implementing various prevention activities.

Acknowledgements

The authors would like to thank the Medical Chamber of Slovenia for helping disseminate the online survey to their members. The authors acknowledge the projects (The last contact with a health professional before suicide: What was missed?, J3-4046; Slovenski moški ranljivi za samomorilno vedenje: duševno zdravje, kvaliteta življenja, socialna povezanost, iskanje pomoči, J5-8244) and program (Alive? Alive! Research and prevention of suicide P3-0384) was financially supported by the Slovenian Research Agency.

Resources

- Ajdacic-Gross, V., Weiss, M. G., Ring, M., Hepp, U., Bopp, M., Gutzwiller, F., & Rossler, W.. (2008). Methods of suicide: international suicide patterns derived from the WHO mortality database. *Bulletin of the World Health Organization*, 86(9), 726-732.
- Andersen, U. A, Andersen, M., Rosholm, J. U. & Gram, L. F. (2000). Contacts to the health care system prior to suicide: a comprehensive analysis using registers for general and psychiatric hospital admissions, contacts to general practitioners and practising specialists and drug prescriptions. *Acta Psychiatrica Scandinavica*, 102(2): 126-34.
- Bajaj, P., Borreani, E., Ghosh, P., Methuen, C., Patel, M. & Crawford, M.J. (2008). Screening for suicidal thoughts in primary care: the views of patients and general practitioners. *Mental Health in Family Medicine*, 5(4), 229–235.
- Cohen, J. (1998). *Statistical power analysis for the behavioral sciences (2nd ed.)*. Hillsdale, NJ: Lawrence Erlbaum.
- De Leo, D., Draper, B.M., Snowdon, J. & Kőlves K. (2013). Contacts with health professionals before suicide: missed opportunities for prevention? *Comprehensive Psychiatry*, 54(7), 1117-1123.
- Delgadillo, J., Moreea, O., Outhwaite-Luke, H., Dace, T., Nicholls, B., Ramseyer, G. et al. (2014). Confidence in the face of risk: the Risk

- Assessment and Management Self-Efficacy Study (RAMSES). *Psychiatric Bulletin* 38(2), 58-65.
- Draper, B., Snowdon, J. & Wyder, M. (2008). A Pilot Study of the Suicide Victim's Last Contact with a Health Professional. *Crisis*, 29(2), 96-101.
- Feldman, M.D., Franks, P., Duberstein, P.R., Vannoy, S., Epstein, R. & Kravitz, R.L. (2007). Let's not talk about it: suicide inquiry in primary care. *Annals of Family Medicine*. 5(5), 412-418.
- Isaac, M., Elias, B., Katz, L.Y., Belik, S.L., Deane, F.P., Enns, M.W. et al. (2009). Gatekeeper training as a preventative intervention for suicide: a systematic review. *Can J Psychiatry*; 54(4), 260-268.
- Isacsson, G. (2000). Suicide prevention - a medical breakthrough? *Acta Psychiatrica Scandinavica*, 102(2), 113-117.
- Isometsä, E.T., Heikkinen, M.E., Marttunen, M.J., Henriksson, M.M, Aro, H.M. & Lönnqvist, J.K. (1995). The last appointment before suicide: Is suicide intent communicated? *The American Journal of Psychiatry*, 152(6), 919-922.
- Luoma, J.B., Martin, C.E. & Pearson, J.L. (2002). Contact with mental health and primary care providers before suicide: a review of the evidence. *Am J Psychiatry*, 159(6), 909-916.
- Mann, J. J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., Haas, A., et al. (2005). Suicide prevention strategies: a systematic review. *JAMA* 294(16). 2064-2074.
- Marušič, A. & Temnik, S. (2011). *Public mental health*. Celje: Celjska Mohorjeva družba. Koper: Faculty of Mathematics, Natural Sciences and Information Technologies.
- Mesec Rodi, P., Roškar, S. & Marušič, A. (2010). Suicide victims' last contact with the primary care physician: report from Slovenia. *The International Journal of Social Psychiatry*, 56(3), 280-287
- Morrison, V. & Bennett, P. (2009). *An Introduction to Health Psychology*. Harlow: Pearson Education Limited.
- National Institute for Public Health, Statistical Office RS. (2017). Available Oct 5, 2017 from: http://pxweb.stat.si/pxweb/database/Dem_soc/05_prebivalstvo/32_Umrljivost/15_05L30_umrli-vzrok/15_05L30_umrli-vzrok.asp
- Norheim, A.B., Grimholt, T. K. & Ekeberg, Ø. (2013). Attitudes towards suicidal behaviour in outpatient clinics among mental health professionals in Oslo. *BMC Psychiatry*, 13(90). doi: 10.1186/1471-244X-13-90.
- Obafunwa, J.O. & Busuttil, A. (1994). Clinical contact preceding suicide. *Postgraduate Medicine*, 70(824): 428-432.
- Pirkis, J. & Burgess, P. (1998). Suicide and recency of health care contacts. A systematic review. *The British Journal of Psychiatry*, 173, 462-474.

- Poštuvan, V., Bečaj, J. & Marušič, A. (2007). Nurses' attitudes towards depression: a study in Slovenia. *Psychiatria Danubina*, 19(1-2), 61-67.
- Poštuvan, V. (2014). *Doživljanje samomora ter varovalni dejavniki in dejavniki tveganja v procesu reintegracije bližnjih po samomoru: doktorska disertacija*. Ljubljana Filozofska fakulteta.
- Roškar, S., Podlesek, A., Zorko, M., Tavčar, R., Dernovšek, M., Z. Groleger, U. et al. (2010). Effects of training program on recognition and management of depression and suicide risk evaluation for Slovenian primary-care physicians: follow-up study. *Croatian Medical Journal.*, 51(3), 237-242.
- Saini, P., While, D., Chantler, K., Windfuhr, K. & Kapur, N. (2014). Assessment and management of suicide risk in primary care. *Crisis* 35(6), 415-425.
- Samuelsson, M., Åsberg, M. & Gustavsson, J.P. (1997). Attitudes of psychiatric nursing personnel towards patients who have attempted suicide. *Acta Psychiatrica Scandinavica*, 95, 222-230.
- Samuelsson, M. & Åsberg, M. (2002). Training program in suicide prevention for psychiatric nursing personnel enhance attitudes to attempted suicide patients. *International Journal of Nursing Studies*, 39(1), 115-121.
- van der Feltz-Cornelis, C.M., Sarchiapone, M., Poštuvan, V., Volker, D., Roškar, S., Tančič Grum, A. et al. (2011). Best practice elements of multilevel suicide prevention strategies: a review of systematic reviews. *Crisis*, 32(6), 319-333.
- World Health Organization. (2014). *Preventing suicide: a global imperative*. Available Oct 5, 2017 from: http://www.who.int/mental_health/suicide-prevention/world_report_2014/en/