

**Patient-Identified Priorities Leading to Attempted Suicide:  
Life is Lived in Interpersonal Relationships**

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## Abstract

**Background:** Attempted suicide is a major public health problem.

**Aim:** To identify patient-identified problems and triggers typically leading to attempted suicide.

**Methods:** A representative sample of  $n=66$  adult patients was recruited from all clinical sites and psychiatrists who treat patients after attempted suicide in **the Canton of Basel-City (Switzerland)**.

Patients were diagnosed using the Structured Clinical Interview for DSM-IV (SCID) and interviewed with a local adaptation of the Explanatory Model Interview Catalogue (EMIC) to study underlying problems and triggers of attempted suicide.

**Results:** 92.4% of the patients had at least one DSM-IV disorder, with depressive disorders being the most prevalent disorder. Although half (50.0%) of the patients identified a health problem, 71.2% identified an interpersonal conflict as underlying problem leading to the suicide attempt. Furthermore, an interpersonal conflict was identified as the trigger of the suicide attempt by more than half of the patients (54.5%).

**Limitations:** The study included German speaking patients only.

**Conclusions:** According to patients, interpersonal problems often amplify underlying psychiatric problems, leading to suicide attempts. Social and interpersonal stressors should be acknowledged with integrated clinical and social interventions to prevent suicidal behavior in patients and populations.

*Keywords:* suicide attempt; deliberate self-harm; patient perspective; underlying problems; triggers

## Introduction

Attempted suicide denotes self-inflicted, potentially injurious behavior with a nonfatal outcome for which there is evidence (either explicit or implicit) of intent to die (Silverman, Berman, Sanddal, O'Carroll, & Joiner Jr., 2007a, 2007b). Attempted suicide is a major public health problem (Welch, 2001). Every year worldwide more than 800,000 people die from suicide, and the number of attempted suicides is even many times higher (World Health Organization, 2014b). Together with completed suicides, attempted suicides constituted 1.4% of the so-called global burden of disease for the year 2012 (World Health Organization, 2014a).

Suicidal behavior (with or without intention to die), however, is not in fact a disease or disorder itself, even though it may result from mental illness. It is widely asserted that over 90% of suicides are associated with mental illness, with depression and alcohol use disorders being particularly prevalent in people who committed suicide (Bertolote & Fleischmann, 2002a, 2002b; Bertolote, Fleischmann, De Leo, & Wasserman, 2004; Mann, 2002). Research on suicidal behavior accordingly has a strong focus on the relationship between psychopathology and suicide (Bertolote, Fleischmann, De Leo, & Wasserman, 2003; De Leo, 2004; Knox, Conwell, & Caine, 2004), and some prevention programs seem to rely solely on psychiatric risk factors as a guide to population-based suicide prevention: "Because most people who commit suicide have a mental disorder [...], suicide rates indicate potential need for mental health care" (U.S. Department of Health and Human Services, 2001). Even though mental health care was demonstrably effective in preventing suicide for at-risk populations, comprehensive prevention measures should also account for psychosocial factors that may affect suicidal behavior. Mental disorders undoubtedly are a major risk factor for suicide, and the focus on psychopathological markers may help to explain and prevent suicidal behavior, but the majority of people with

mental disorders do not attempt or commit suicide. Most of the data emphasizing the strong link between mental illness and suicidal behavior originated from Euro-American studies (Bertolote et al., 2004) and many of these studies were performed in subjects who had been admitted to psychiatric hospitals following their suicide attempt (Bertolote & Fleischmann, 2002a). This may have resulted in an overestimation of the global significance of psychiatric risk factors for suicidal behavior in the general population. In fact, experiences from Asian countries (India, China) suggest that cultural values and situational stressors may likewise play an important role in suicidal behavior (Eddleston & Phillips, 2004; Parkar, Nagarsekar, & Weiss, 2012). In prior studies we found that migration may also play an important role (Brückner, Muheim, Berger, & Riecher-Rössler, 2011; Yilmaz & Riecher-Rössler, 2008, 2012), and it is quite well known that gender-associated factors massively influence suicidal behavior, with women having a much higher rate of attempted suicide and men having a much higher rate of completed suicide (Canetto & Sakinofsky, 1998; Weissman et al., 1999). Suicidal behavior therefore became increasingly recognized as a complex public health problem involving psychological, social, biological, cultural and environmental factors (Bertolote, 2004; De Leo, 2004; Hammond, 2001; Knox et al., 2004; Phillips et al., 2002; Welch, 2001).

In this study, we aimed to clarify the relative role of psychopathology and of situational and contextual stressors (e.g., interpersonal, health, work or financial problems) for suicidal behavior, pursuant to reports of patients who attempted suicide. The identification of patient-identified priorities leading to suicide attempt in a sample from a qualitative survey may have important implications for both theory building and very practical considerations about ways of approaching suicide prevention and mental health policy. Patients' explanations of attempted suicide may affect clinical practice and interventions, as well as all levels of prevention:

universal, selective, and indicated (Bertolote, 2004).

## Methods

### Procedures

All patients living in **the Canton of Basel-City (Switzerland)** with suicide attempts between November 2005 and February 2007 were contacted and interviewed if they gave their consent. Participants were recruited from all clinical sites which were treating patients after attempted suicide **in the Canton of Basel-City**. The emergency unit of the **University Hospital Basel**, where most patients in need of medical care after suicide attempts are seen, was the main source of recruitment. Further sources were the Psychiatric University Clinics as the main psychiatric treatment center in the area, the hospitals surrounding **Basel-City**, and all psychiatrists in private practice in **Basel-City**. All of these sites were already referring patients to the clinical epidemiological WHO/EURO Multicentre Study on Suicidal Behavior (Muheim et al., 2013); hence, a mechanism for recruitment was already established and functioning effectively at the beginning of the current study.

Upon admission at all clinical sites suicide attempters were regularly seen and assessed by a psychiatrist. The psychiatrist obtained basic sociodemographic and clinical data of the patient as well as information about the suicide attempt (e.g., the method) using the brief epidemiological clinical interview protocol of the WHO/EURO Multicentre Study on Suicidal Behavior in **the Canton Basel-City** (Muheim et al., 2013). Results of this representative study, which was covering the time period between January 2003 and December 2006, have been published recently (Muheim et al., 2013). For our study the patients of the WHO/EURO Multicentre Study were invited to take part in additional interviews to examine the reasons for

the suicide attempt in more detail. If patients agreed, they were interviewed by a member of our study team as soon as possible after their suicide attempt leading to medical care.

Inclusion criteria for the current study were minimum age of 18 years, proficiency in German to participate in the research interviews, and written informed consent. In accordance with the definition of parasuicide guiding recruitment in the WHO/EURO Multicentre study (Platt et al., 1992), patients whose current behavior was characterized by the responsible psychiatrist as an instance of a habitual pattern of self-harming behavior, rather than an acute suicide attempt, were excluded from the current study.

For patients who declined participation or who did not show up for the scheduled interview, at minimum sociodemographic and basic clinical data, which were recorded for the WHO/EURO Multicentre Study and which did not rely on informed consent and participation of the patient (Muheim et al., 2013), were available and were used for comparison with our study group.

The current study was approved by the local Ethics committee and conducted according to the declaration of Helsinki.

## **Assessments**

The Structured Clinical Interviews for DSM-IV Disorders (SCID-I and SCID-II) are considered the “gold-standard” to determine DSM-IV Axis I (major mental) disorders and Axis II (personality) disorders (First, Gibbon, Spitzer, & Williams, 1997; First, Spitzer, Gibbon, & Williams, 1997). Following the assessments with the SCID in the first appointment, a locally adapted explanatory model interview based on the framework of the Explanatory Model Interview Catalogue (EMIC) (Weiss, 1997) was administered by the same member of the study

group in a second appointment to elicit patient's explanations and the sociocultural contexts of the suicide attempts. This EMIC interview includes questions about circumstances leading to suicide attempts (underlying problems and triggers) and about patterns of personal distress (including symptoms), social distress (including stigma), prior help-seeking, and perceived causes of attempted suicide. Each section of the interview includes coding items to categorize the answers of the respondent. The interviewer codes a patient's response on an extensive list of problems and triggers, that is, on an extensive list of various stressors that include specific interpersonal or social problems. Narrative elaboration is included in the data set to explain these problems. The local adaption of the EMIC interview used here was based on the structure of other EMIC interviews for study of attempted suicide (Chowdhury et al., 2001; Parkar, Dawani, & Weiss, 2006, 2008).

### **Data analysis**

First, sociodemographic data and the method of the suicide attempt were compared between the study sample and the patients who did not participate in our study. If a participant had multiple suicide attempts during the study period, only the event when he or she was also interviewed for this study was considered. If *non*-participants had multiple suicide attempts during the study period, the data of the most recent event were drawn from the WHO/EURO Multicentre study database for comparison with the respective data in our study sample. Statistical tests used for group comparisons were Fisher exact test,  $X^2$ -test and Mann-Whitney-U-test.

Subsequently, we performed descriptive statistical analyses of the SCID-I and SCID-II data and of the coded quantitative variables of the EMIC interview on underlying problems and triggers of the suicide attempts.

Finally, some additional exploratory analyses were performed using  $X^2$ -tests to explore the role of age and gender with respect to the patient-identified priorities leading to suicidal behavior.

All analyses were performed using SPSS, Version 18 (SPSS Inc., 2009).

## Results

### Sample

During the study period  $N=215$  patients who fulfilled the inclusion criteria for the current study presented at the study sites after one or multiple suicide attempts.  $N=66$  (30.7%) of these patients agreed to participate in our study. The EMIC assessment (2nd interview) was performed  $M=14.5$  ( $SD=40.1$ ) days after the suicide attempt ( $Md=5$ ,  $Range=1-276$ ). Participants in our study did not differ from the  $n=149$  non-participants regarding available socio-demographics and the method of the suicide attempt (Table 1).

### Mental disorders

Mental disorders were highly prevalent in our study sample: 92.4% of the patients had at least one DSM-IV Axis I disorder, with depressive disorders (53.0%) being the most prevalent main diagnosis (Table 2). 30 (45.5%) of the patients had at least one further diagnosis on Axis I; substance use disorders were the most frequent secondary diagnosis. On Axis II, Borderline



personality disorders (22.7%) were most prevalent among the patients who were in need of medical care after attempted suicide (Table 2).

### **Characteristics of the suicide attempts**

Intoxication by drug overdose was the most frequent method of attempted suicide, accounting for more than three fourth (77.2%) of the incidents in our sample (Table 1). The vast majority of the patients (68.2%) reported that they attempted suicide impulsively (“Did you have a plan? Or would you say it happened impulsively?”); only relatively few of the suicide attempts were planned (16.7%) or at least partially planned (15.2%), pursuant to patients’ reports.

### **Patient-identified problems and triggers leading to attempted suicide**

Table 3 shows the distribution of the patient-identified underlying problems leading to suicide attempts (“What in your life do you believe has led to this event? What are the problems which led to this event?”), and the distribution of the patient-identified triggers (“What do you believe, was the trigger for this event?”). The patients’ narratives often described life stories with close connections between various problems over a prolonged period of time. Thus, when asked about the priorities leading to attempted suicide, the patients’ answers often were an accumulation of various problems (25.8%), otherwise referred to as “everything came together”.

However, interpersonal conflicts were most often identified by the patients as one of the underlying problems which led to the suicide attempt (71.2%), and 28.8% of the patients identified an interpersonal conflict as the main underlying problem. Additionally, more than half of the patients (54.5%) identified an interpersonal conflict which, in their view, had triggered the suicide attempt. The narratives of these patients described experiences of abandonment,

rejection, loneliness, lack of understanding, and dependencies as part of their life story. In particular, the patients frequently described problems of communication with their partner (Table 3) that pointed to conflicts on being able to negotiate their needs within a relationship. For instance, a 40 year old woman who had been married four times resorted to suicide attempts each time the relationship failed. In the current case that woman attempted suicide after her partner, despite promising to do so, failed to accompany her to the graveyard of her son at the son's death day:

“The partner only is concerned about himself. They do what they want, and this is all great, but it is bad when I raise my wishes and do things I want to do. When I want to talk with him, it is not possible. But in a relationship it is the most important thing that you talk to each other, isn't it? To bring up the problems, otherwise all that will not work ...”.

Health problems, in particular mental disorders, were likewise frequently identified by the patients as underlying problems and triggers of suicide attempts, but (mental) health problems were mentioned less often than interpersonal stressors (Table 3). Moreover, even those patients who accepted the relevance of their mental illness often specified an interpersonal component that led to or triggered their suicide attempts. For instance, a 28 year old female immigrant explained:

“The doctor first listed several symptoms, which would account for a depression. All applied to me and made sense. I could accept the diagnosis and wanted to see if I can overcome it. ... But for me, it was really everything together, while the death of my mother was probably the main problem. I always say that if she would have lived, everything would be different. I always say, that I had such a great life and now it turned so badly.”

The family of this patient had collapsed after her father had killed her mother. The patient found solace in a relationship, yet a miscarriage that threatened the relationship triggered her suicide attempt. Note that this patient furthermore described her frustration with the clinical treatment that exclusively focused on the diagnosis of depression.

### **The role of age and gender regarding patient-identified problems and triggers**

We finally performed some additional exploratory analyses to explore the role of age, gender and nationality with respect to the patient-identified priorities leading to suicidal behavior. When compared to men, female suicide attempters did more often identify problems with their parents to be one of the existing problems in their life (Fisher's exact test:  $p=.015$ ). In contrary, men more often named a physical illness to be an issue in their life that led to the suicide attempt (Fisher's exact test:  $p=.014$ ).

Furthermore, when compared to their older counterparts, patients below 35 years (median-split) more frequently reported interpersonal problems ( $\chi^2=15.391$ ;  $df=1$ ;  $p<.001$ ), particularly problems with their partners ( $\chi^2=3.956$ ;  $df=1$ ;  $p<.001$ ) and with their parents ( $\chi^2=16.176$ ;  $df=1$ ;  $p<.001$ ), to be among the priorities leading to the suicide attempt. Younger patients also more often mentioned stress at school (Fisher's exact test:  $p=.023$ ) and at work ( $\chi^2=10.949$ ;  $df=1$ ;  $p=.001$ ), as well as problems in their work environment in general ( $\chi^2=3.957$ ;  $df=1$ ;  $p=.047$ ), than their older counterparts, while the latter more frequently named health issues as an underlying problem leading to the suicide attempt ( $\chi^2=3.882$ ;  $df=1$ ;  $p=.049$ ).

Finally, when compared to Swiss citizens, immigrants more frequently reported work-related stressors (Fisher's exact test:  $p=.028$ ) to be among the priorities leading to the suicide attempt.

Apart from these relationships between underlying problems and sociodemographics, there were no differences between male and female suicide attempters or between older and younger patients or Swiss citizens and immigrants, neither with respect to underlying problems nor with respect to the most important problem or to the trigger of the suicide attempt (detailed statistics are not reported here due to space limitations). Note that even the above mentioned relationships between sociodemographics and underlying problems should be considered with caution since the statistically significant results of these exploratory analyses would not resist Bonferroni correction to control for alpha error inflation due to multiple testing in the sample.

### **Discussion**

Corroborating findings from previous studies, mental disorders - particularly depressive and substance use disorders - were found to be highly prevalent in patients who attempted suicide (Bertolote & Fleischmann, 2002a; Bertolote et al., 2004; Mann, 2002; Muheim et al., 2013). 92.4% of our patients in need for medical care following attempted suicide were diagnosed with at least one DSM-IV Axis I mental disorder. Nearly half of them (47.0%) identified a mental health issue including substance use as an existing problem in their life that led to the suicide attempt. However, the patients in our sample identified a multitude of other problems, particularly interpersonal conflicts, which in their view led to the suicide attempts: 71.2% of the patients mentioned an interpersonal conflict as one of the underlying problems, 28.8% identified such conflict as the most important underlying problem, and more than half of the patients (54.5%) named an interpersonal conflict as the trigger of the suicide attempt. Such trigger function of interpersonal conflicts seems to require particular attention given that in most

of the cases the suicide attempt happened intuitively without long hours of premeditation (68.2%) or was at least only partially planned (15.2%) (Simon et al., 2001).

While denoting the important role of psychopathology in the genesis of suicide attempts, our findings suggest that clinicians and other people concerned with suicide prevention should give high attention to social, and particularly interpersonal, conflicts and stressors with regard to the prediction and prevention of suicidal behavior. The crucial role of social factors in the advent of suicidal behavior has already been reported in previous studies from Asian countries (Eddleston & Phillips, 2004; Parkar et al., 2012) and among Turkish immigrants in Switzerland (Brückner et al., 2011; Yilmaz & Riecher-Rössler, 2008, 2012). In line with this are the recently emerging views that suicidal behavior constitutes a complex public health problem, with psychological, social, biological, cultural and environmental factors being involved. If recognized as a multi-causal incident, then suicidal behavior requires for integrated clinical and population-based prevention approaches (Bertolote, 2004; De Leo, 2004; Hammond, 2001; Knox et al., 2004; Phillips et al., 2002; Welch, 2001).

On a public health level the social and cultural dimensions of suicide attempts point to the need of a broader framework for prevention strategies (Bertolote et al., 2003; Knox et al., 2004). Instead of exclusively targeting psychopathology, prevention strategies might be improved by including assessments of larger social and cultural problems, such as childhood maltreatment, alcoholism and substance abuse, homosexuality, or unemployment and poverty, particularly when they are highly stigmatized and thus create barriers to relate to others.

Likewise caution is warranted on a clinical level not to overemphasize the role of psychopathology for suicidal behavior. Ignoring patient-identified social factors related to suicidal behavior may lead to a bias in risk prediction and treatment of suicidal behavior as well

as in deficient therapeutic attitudes. Due to the crucial role of interpersonal conflicts in the development of suicidal behavior pursuant to the reports of our patients, the treatment of suicidal behavior should have a strong focus on interpersonal relationships and problems. A promising intervention might be provided by the Attempted Suicide Short Intervention Program (ASSIP) which focuses on the patient's view of the suicidal event and which is currently under evaluation (Gysin-Maillart & Michel, 2013). Focusing on interpersonal conflicts might be particularly important in younger women (whereas subjective suffering from physical illness seems to be a pronounced risk factor in older men). The perpetuation of suffering as a result of relationships described in terms of lack of understanding, lack of time and rejection that finally led to the suicidal behavior must be avoided in the therapeutic setting at any circumstance. Psychiatric treatment must not be perceived by the patients to have the same characteristics as the unsatisfactory or disappointing interpersonal relationships in everyday life. In this regard, our findings support views that the therapeutic alliance is more important than any other treatment approach in the treatment of self-injurious behavior (Trepal, 2010). The significance of interpersonal relationships for the formation of and recovery from mental illness has been documented for both therapeutic and everyday settings (Beach & Kaslow, 2006; Denton, 2007; Lewis, 2000). While the need for a better understanding of dyadic processes in research and clinical practice is often discussed (Borrell-Carrio, Suchman, & Epstein, 2004), some go even further and argue for the centrality of relational processes to understand and treat mental disorders (Lewis, 1998). Consequently, some authors argued for the inclusion of relational disorders into the DSM-IV in order to guide mental health professionals in ways to more efficiently treat mental disorders (Beach & Kaslow, 2006; Beach, Wamboldt, Kaslow, Heyman, & Reiss, 2006; First, 2006). In any case, when assessing the risk of self-harm and suicide in

patients, clinicians might be well advised to systematically ask for interpersonal problems and conflicts. Physical illness and associated coping strategies seem to be further important issues that merit the attention of clinicians in order to prevent suicidal behavior, particularly in older men. In immigrants work-related stressors might be particularly important regarding suicidal behavior. If these findings and the results from a recent meta-analysis showing that approximately half of all people who commit suicide communicate their suicidal intentions prior to their suicide (Pompili et al., 2016) are taken into account, this may help to prevent suicidal behavior in clinical settings.

### **Limitations and further perspectives**

Several limitations of this study have to be addressed. First, we recruited our participants from health facilities where they were seeking help after attempted suicide. The multidisciplinary emergency unit of the **University Hospital Basel** was the main source of recruitment. However, the remaining participants were mainly recruited from mental health facilities. This might have led to an overestimation of the prevalence of mental disorders in suicide attempters and hence might have hindered testing the impact of psychosocial factors independently from mental disorders.

Second, we only included patients with sufficient proficiency in German to participate in research interviews. We hence do not know whether our findings would apply to foreign-language suicide attempters. The significance of social factors for the emergence of suicide attempts, however, has also been demonstrated in Turkish immigrants in **Switzerland** (Brückner et al., 2011; Yilmaz & Riecher-Rössler, 2008, 2012) and in studies from other (non-western) countries (Eddleston & Phillips, 2004; Parkar et al., 2012).

Third, of the  $N=215$  patients who fulfilled the inclusion criteria for the current study, only  $n=66$  (30.7%) agreed to participate. Although these participants did not differ from the  $n=149$  non-participants in the available sociodemographics and in the method of the suicide attempt, a selection bias is still possible.

Fourth, for 11 (16.7%) of the patients SCID data were lacking. For these patients ICD-10 diagnoses given by the psychiatrists seeing the patients after their suicide attempts were coded. Thus, the diagnoses of these patients without structured clinical interview may be overestimated in the absence systematic criteria-based assessment with the SCID.

Fifth, the exploratory analyses on the role of age, gender and nationality should be considered preliminary due to the small sample size. Addressing these questions provided information about the available sample from a qualitative survey, rather than a rigorous and generalizable test of hypotheses concerning age, gender and nationality. This should be the aim of further research.

Finally, it would have been interesting to see whether particular patient-identified problems or triggers of attempted suicides were associated with certain mental disorders. We desisted from performing these analyses in the current study due to the small diagnostic subgroups in our sample. However, answering this question will be an important task for future research. This also applies to the examination of further characteristics of suicide attempters (e.g., sociodemographics such as marital status or education) or to characteristics of the suicide attempt (e.g., the method of the suicide attempt) that might be related to patient-identified priorities leading to suicidal behavior. Knowledge on such associations would help to identify high-risk constellations (e.g., if unfolding that young depressive girls are particularly prone to



suicide attempts in the case of interpersonal conflicts with their parents) and hence to optimally tailor suicide prevention measures to individuals and subpopulations.

## **Conclusions**

The high prevalence of mental disorders among patients in need for medical care after attempted suicides denotes the important role of psychopathology in the development of suicidal behavior. From the patients' point of view, however, there are often interpersonal stressors and problems that magnify underlying psychiatric problems, leading to attempted suicide.

Interactions of social, and particularly interpersonal, stressors with psychopathology thus seem to be crucial with regard to the prevention and treatment of suicidal behavior. Overall, our findings denote the importance of taking into account patient explanations of suicidal behavior to improve the assessment and prevention of suicidal behavior in both clinical and public health settings (Flanagan, Davidson, & Strauss, 2007).

**Conflict of interests**

None.

## References

- Beach, S. R., & Kaslow, N. J. (2006). Relational disorders and relational processes in diagnostic practice: introduction to the special section. *Journal of Family Psychology, 20*(3), 353-355. doi: 10.1037/0893-3200.20.3.353
- Beach, S. R., Wamboldt, M. Z., Kaslow, N. J., Heyman, R. E., & Reiss, D. (2006). Describing relationship problems in DSM-V: toward better guidance for research and clinical practice. *Journal of Family Psychology, 20*(3), 359-368. doi: 10.1037/0893-3200.20.3.359
- Bertolote, J. M. (2004). Suicide prevention: at what level does it work? *World Psychiatry, 3*(3), 147-151.
- Bertolote, J. M., & Fleischmann, A. (2002a). Suicide and psychiatric diagnosis: a worldwide perspective. *World Psychiatry, 1*(3), 181-185.
- Bertolote, J. M., & Fleischmann, A. (2002b). Suicide rates in China. *Lancet, 359*(9325), 2274; author reply 2274-2275. doi: 10.1016/S0140-6736(02)09268-1
- Bertolote, J. M., Fleischmann, A., De Leo, D., & Wasserman, D. (2003). Suicide and mental disorders: do we know enough? *British Journal of Psychiatry, 183*, 382-383.
- Bertolote, J. M., Fleischmann, A., De Leo, D., & Wasserman, D. (2004). Psychiatric diagnoses and suicide: revisiting the evidence. *Crisis, 25*(4), 147-155.
- Borrell-Carrio, F., Suchman, A. L., & Epstein, R. M. (2004). The biopsychosocial model 25 years later: principles, practice, and scientific inquiry. *Annals of Family Medicine, 2*(6), 576-582. doi: 10.1370/afm.245
- Brückner, P., Muheim, F., Berger, P., & Riecher-Rössler, A. (2011). [Characteristics of suicide attempts in immigrants from Turkey in the Canton Basel-Stadt: results from the

- WHO/EURO-multicenter study]. *Nervenheilkunde*, 7, 517-522.
- Canetto, S. S., & Sakinofsky, I. (1998). The gender paradox in suicide. *Suicide and Life-Threatening Behavior*, 28(1), 1-23.
- Chowdhury, A. N., Sanyal, D., Dutta, S. K., De, R., Banerjee, S., Bhattacharya, K., . . . Weiss, M. G. (2001). Interrater reliability of the EMIC in a pilot study in West Bengal. *International Medical Journal*, 8, 25-29.
- De Leo, D. (2004). Suicide prevention is far more than a psychiatric business. *World Psychiatry*, 3(3), 155-156.
- Denton, W. H. (2007). Issues for DSM-V: relational diagnosis: an essential component of biopsychosocial assessment. *American Journal of Psychiatry*, 164(8), 1146-1147. doi: 10.1176/appi.ajp.2007.07010181
- Eddleston, M., & Phillips, M. R. (2004). Self poisoning with pesticides. *BMJ (Clinical Research Ed.)*, 328(7430), 42-44. doi: 10.1136/bmj.328.7430.42
- First, M. B. (2006). Relational processes in the DSM-V revision process: comment on the special section. *Journal of Family Psychology*, 20(3), 356-358. doi: 10.1037/0893-3200.20.3.356
- First, M. B., Gibbon, M., Spitzer, R. L., & Williams, J. B. W. (1997). *Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II)*. Washington, DC: American Psychiatric Association.
- First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1997). *Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I), Clinical Version*. Washington, DC: American Psychiatric Association.
- Flanagan, E. H., Davidson, L., & Strauss, J. S. (2007). Issues for DSM-V: incorporating patients' subjective experiences. *American Journal of Psychiatry*, 164(3), 391-392. doi:

10.1176/ajp.2007.164.3.391

- Gysin-Maillart, A., & Michel, K. (2013). *[Brief therapy after attempted suicide. ASSIP – Attempted Suicide Short Intervention Program]*. Bern: Hans Huber.
- Hammond, W. R. (2001). Suicide prevention: broadening the field toward a public health approach. *Suicide and Life-Threatening Behavior, 32*(1 Suppl), 1-2.
- Knox, K. L., Conwell, Y., & Caine, E. D. (2004). If suicide is a public health problem, what are we doing to prevent it? *American Journal of Public Health, 94*(1), 37-45.
- Lewis, J. M. (1998). For better or worse: interpersonal relationships and individual outcome. *American Journal of Psychiatry, 155*(5), 582-589.
- Lewis, J. M. (2000). Repairing the bond in important relationships: a dynamic for personality maturation. *American Journal of Psychiatry, 157*(9), 1375-1378.
- Mann, J. J. (2002). A current perspective of suicide and attempted suicide. *Annals of Internal Medicine, 136*(4), 302-311.
- Muheim, F., Eichhorn, M., Berger, P., Czernin, S., Stoppe, G., Keck, M., & Riecher-Rössler, A. (2013). Suicide attempts in the county of Basel: results from the WHO/EURO Multicentre Study on Suicidal Behaviour. *Swiss Medical Weekly, 143*, w13759. doi: 10.4414/smw.2013.13759
- Parkar, S. R., Dawani, V., & Weiss, M. G. (2006). Clinical diagnostic and sociocultural dimensions of deliberate self-harm in Mumbai, India. *Suicide and Life-Threatening Behavior, 36*(2), 223-238. doi: 10.1521/suli.2006.36.2.223
- Parkar, S. R., Dawani, V., & Weiss, M. G. (2008). Gender, suicide, and the sociocultural context of deliberate self-harm in an urban general hospital in Mumbai, India. *Culture, Medicine and Psychiatry, 32*(4), 492-515. doi: 10.1007/s11013-008-9109-z

- Parkar, S. R., Nagarsekar, B. B., & Weiss, M. G. (2012). Explaining suicide: identifying common themes and diverse perspectives in an urban Mumbai slum. *Social Science & Medicine*, 75(11), 2037-2046. doi: 10.1016/j.socscimed.2012.07.002
- Phillips, M. R., Yang, G., Zhang, Y., Wang, L., Ji, H., & Zhou, M. (2002). Risk factors for suicide in China: a national case-control psychological autopsy study. *Lancet*, 360(9347), 1728-1736. doi: 10.1016/S0140-6736(02)11681-3
- Platt, S., Bille-Brahe, U., Kerkhof, A., Schmidtke, A., Bjerke, T., Crepet, P., . . . et al. (1992). Parasuicide in Europe: the WHO/EURO multicentre study on parasuicide. I. Introduction and preliminary analysis for 1989. *Acta Psychiatrica Scandinavica*, 85(2), 97-104.
- Pompili, M., Belvederi Murri, M., Patti, S., Innamorati, M., Lester, D., Girardi, P., & Amore, M. (2016). The communication of suicidal intentions: a meta-analysis. *Psychological Medicine*, 46, 2239-2253.
- Silverman, M. M., Berman, A. L., Sanddal, N. D., O'Carroll, P. W., & Joiner Jr., T. E. (2007a). Rebuilding the Tower of Babel: A revised nomenclature for the study of suicide and suicidal behaviors Part 1: Background, rationale, and methodology. *Suicide and Life-Threatening Behavior*, 37(3), 248-263.
- Silverman, M. M., Berman, A. L., Sanddal, N. D., O'Carroll, P. W., & Joiner Jr., T. E. (2007b). Rebuilding the Tower of Babel: A revised nomenclature for the study of suicide and suicidal behaviors Part 2: Suicide-Related ideations, communications, and behaviors. *Suicide and Life-Threatening Behavior*, 37(3), 264-277.
- Simon, O. R., Swann, A. C., Powell, K. E., Potter, L. B., Kresnow, M. J., & O'Carroll, P. W. (2001). Characteristics of impulsive suicide attempts and attempters. *Suicide and Life-Threatening Behavior*, 32(1 Suppl), 49-59.

- SPSS Inc. (2009). PASW Statistics for Windows, Version 18.0. Chicago, IL: SPSS Inc.
- Trepal, H. C. (2010). Exploring self-injury through a relational cultural lens. *Journal of Counseling & Development, 88*(4), 492-499.
- U.S. Department of Health and Human Services. (2001). *Mental health: culture, race, and ethnicity—a supplement to mental health: a report of the surgeon general*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.
- Weiss, M. G. (1997). Explanatory Model Interview Catalogue: framework for comparative study of illness experience. *Transcultural Psychiatry, 34*(2), 235-263.
- Weissman, M. M., Bland, R. C., Canino, G. J., Greenwald, S., Hwu, H. G., Joyce, P. R., . . . Yeh, E. K. (1999). Prevalence of suicide ideation and suicide attempts in nine countries. *Psychological Medicine, 29*(1), 9-17.
- Welch, S. S. (2001). A review of the literature on the epidemiology of parasuicide in the general population. *Psychiatric Services, 52*(3), 368-375.
- World Health Organization. (2014a). Disease burden. 2014, from [http://www.who.int/healthinfo/global\\_burden\\_disease/estimates/en/index2.html](http://www.who.int/healthinfo/global_burden_disease/estimates/en/index2.html)
- World Health Organization. (2014b). Preventing suicide: A global imperative. 2015, from [http://www.who.int/mental\\_health/suicide-prevention/world\\_report\\_2014/en/](http://www.who.int/mental_health/suicide-prevention/world_report_2014/en/)
- Yilmaz, T. A., & Riecher-Rössler, A. (2008). [Suicide attempts among first and second generation immigrants]. *Neuropsychiatrie, 22*(4), 261-267.
- Yilmaz, T. A., & Riecher-Rössler, A. (2012). Attempted suicide in immigrants from Turkey: a comparison with Swiss suicide attempters. *Psychopathology, 45*, 366-373.

Table 1 Sample characteristics.

Characteristic	Total sample (n=215)	Non-participants (n=149)	Participants (n=66)	<i>p</i>
Age (in years); <i>M(SD)</i> <sup>1</sup>	40.1 (17.1)	41.4 (17.8)	37.0 (14.5)	.135
Sex; n(%) <sup>2</sup>				.463
Male	64 (31.4)	48 (32.9)	16 (27.6)	
Female	140 (68.6)	98 (67.1)	42 (72.4)	
Marital status; n(%) <sup>3</sup>				.158
Single	100 (50.3)	60 (44.8)	40 (61.5)	
Married	53 (26.6)	39 (29.1)	14 (21.5)	
Divorced or separated	38 (19.1)	28 (20.9)	10 (15.4)	
Widowed	8 (4.0)	7 (5.2)	1 (1.5)	
Cohabitation; n(%) <sup>4</sup>				.910
Yes	91 (54.5)	63 (54.8)	28 (53.8)	
No	76 (45.5)	52 (45.2)	24 (46.2)	
Citizenship; n(%) <sup>5</sup>				.876
Swiss	137 (67.5)	94 (67.1)	43 (68.3)	
Other	66 (32.5)	46 (32.9)	20 (31.7)	
Employment status; n(%) <sup>6</sup>				.337
Employed	50 (28.7)	31 (25.6)	19 (35.8)	
Homemaker	12 (6.9)	9 (7.4)	3 (5.7)	
Education	23 (13.2)	13 (10.7)	10 (18.9)	
Unemployed	27 (15.5)	18 (14.9)	9 (17.0)	
Disability benefits	41 (23.6)	33 (27.3)	8 (15.1)	
Old age pension	10 (5.7)	8 (6.6)	2 (3.8)	
Other	11 (6.3)	9 (7.4)	2 (3.8)	
Method of attempted suicide; n(%) <sup>1</sup>				.528
Intoxication	160 (77.7)	116 (77.9)	44 (77.2)	
Hanging	8 (3.9)	5 (3.4)	3 (5.3)	
Drowning	3 (1.5)	3 (2.0)	0	
Firearms	1 (0.5)	0	1 (1.8)	
Burning	5 (2.4)	4 (2.7)	1 (1.8)	
Cutting	24 (11.7)	17 (11.4)	7 (12.3)	
Jumping from heights	2 (1.0)	2 (1.3)	0	
Railway	2 (1.0)	2 (1.3)	0	
Car accident	1 (0.5)	0	1 (1.8)	



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<sup>1</sup>  $n=9$  patients with missing data

<sup>2</sup>  $n=11$  patients with missing data

<sup>3</sup>  $n=16$  patients with missing data

<sup>4</sup>  $n=48$  patients with missing data

<sup>5</sup>  $n=12$  patients with missing data

<sup>6</sup>  $n=41$  patients with missing data

Table 2 Diagnoses (DSM-IV)(*n*=66).

<b>Diagnosis</b>	<b><i>n</i></b>	<b>%</b>
<b>Axis I: Main diagnosis</b>		
Depressive disorder	35	53.0
Bipolar disorder	5	7.6
Schizophrenia / schizoaffective disorder	5	7.6
Psychotic disorder	1	1.5
Substance use disorder	6	9.1
Anxiety disorder	4	6.1
Obsessive-compulsive disorder	1	1.5
Adjustment disorder	2	3.0
PTSD	1	1.5
Dementia	1	1.5
No disorder	5	7.6
<b>Axis II</b>		
Histrionic personality disorder	1	1.5
Dependent personality disorder	1	1.5
Narcissitic personality disorder	1	1.5
Borderline personality disorder	15	22.7
No personality disorder	48	72.7

Table 3 Patient-identified problems and triggers of deliberate self-harm events  
(*n*=66).

EMIC variables: triggers and problems	Underlying Problems				Triggers <sup>1</sup>	
	All identified <sup>1</sup>		Main identified		<i>n</i>	%
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Interpersonal conflict</b>	<b>47</b>	<b>71.2</b>	<b>19</b>	<b>28.8</b>	<b>36</b>	<b>54.5</b>
Partner	36	53.0	16	24.2	30	45.5
Parents	18	27.3	3	4.5	4	6.1
Children	6	9.1	0	0.0	0	0.0
Other family	3	4.5	0	0.0	4	6.1
Other interpersonal	5	7.6	0	0.0	3	4.5
<b>Physical and mental health</b>	<b>33</b>	<b>50.0</b>	<b>14</b>	<b>21.2</b>	<b>11</b>	<b>16.7</b>
Pain	4	6.1	1	1.5	1	1.5
Physical illness	7	10.6	2	3.0	1	1.5
Mental illness	24	36.4	9	13.6	7	10.6
Substance abuse (self)	7	10.6	2	3.0	4	6.1
Substance abuse (others)	3	4.5	0	0.0	0	0.0
<b>Social distress</b>	<b>20</b>	<b>30.3</b>	<b>6</b>	<b>9.1</b>	<b>2</b>	<b>3.0</b>
Financial problems	15	22.7	6	9.1	1	1.5
School	5	7.6	0	0.0	1	1.5
<b>Work problems</b>	<b>23</b>	<b>34.8</b>	<b>4</b>	<b>6.1</b>	<b>4</b>	<b>6.1</b>
Mobbing	0	0.0	0	0.0	1	1.5
Work stress	12	18.2	3	4.5	3	4.5
Work insecurity	6	9.1	1	1.5	0	0.0
Unemployment	5	7.6	0	0.0	0	0.0
Other work problems	1	1.5	0	0.0	0	0.0
<b>Victimization</b>	<b>10</b>	<b>15.2</b>	<b>1</b>	<b>1.5</b>	<b>4</b>	<b>6.1</b>
Sexual abuse	4	6.1	1	1.5	1	1.5
Physical abuse	4	6.1	0	0.0	1	1.5
Verbal abuse	4	6.1	0	0.0	3	4.5
<b>Events before the suicide attempts</b>	<b>14</b>	<b>21.2</b>	<b>3</b>	<b>4.5</b>	<b>2</b>	<b>3.0</b>
Death	10	15.2	3	4.5	1	1.5
Suicide	2	3.0	0	0.0	0	0.0
Other event	2	3.0	0	0.0	1	1.5
<b>Accumulation of problems/triggers</b>	<b>17</b>	<b>25.8</b>	<b>12</b>	<b>18.2</b>	<b>0</b>	<b>0</b>
Nothing	0	0	0	0	4	6.1
Don't know	0	0	0	0	2	3.0
Other	6	9.1	0	0	6	9.1
Missing	0	0	7	10.6	0	0

<sup>1</sup> multiple answers possible