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Apples to oranges?: A direct comparison between suicide attempters and suicide completers

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Abstract

Background: Suicide attempters and completers may represent different but overlapping groups of distressed individuals. Although depression is related to an increased risk of suicide, the presence of depression may not discriminate suicide attempters from completers. The present study compared suicide attempters and suicide completers on symptoms of depression, the presence of suicide-related variables and stressful life events.

Aims: The present study sought to identify the key differences between 50 suicide attempters and 50 completers, all diagnosed with a Major Depressive Disorder at the time of their suicidal act.

Methods: Suicide attempters and family member informants of suicide completers participated in a thorough psychosocial evaluation. To maximize comparisons with completers, suicide attempters were subclassified based on the lethality of their attempt.

Results: Suicide attempters and completers were similar on most measures of depressive symptoms. However, suicide completers were significantly more likely to use alcohol or drugs prior to their suicidal act and they were more likely to leave a suicide note. Suicide completers were significantly more likely to have encountered significant job stress and financial problems.

Conclusions: The present findings have documented several similarities and differences between suicide attempters and suicide completers. Future research may help to clarify the key warning signs that reflect the risk of completed suicide in adults who have been diagnosed with a Major Depressive Disorder.

Keywords

Suicide; suicide attempt; suicide completion

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Conflict of Interest:

All authors declare they have no conflict of interest.

Several psychiatric disorders are related to an increased risk of attempted suicide (Beautrais et al., 1996) and completed suicide (Harris & Barraclough, 1997; Cavanaugh, Carson, Sharpe, & Lawrie, 2003). Mood disorders are among the most common psychiatric diagnoses associated with attempted and completed suicide (Mann, 2002), and depression represents an important risk factor for suicide (Beautrais, 2001; Bostwick & Pankratz, 2000). However, by itself, the presence of depression does not necessarily indicate suicide risk. Other factors might clarify which depressed patients are most likely to die by suicide and therefore who would require immediate intervention.

A previous suicide attempt is a strong predictor of future suicide attempts (Sokero et al., 2005) and eventual death by suicide (Coryell et al., 2002; Coryell & Young, 2005; Joiner et al., 2005; Fawcett et al., 1990). When examined from the reverse angle, roughly one third of suicide completers had previously attempted suicide (Fushimi, Sugawara, & Saito, 2006; Isometsa & Lonnqvist, 1998; Sinclair et al., 2005). The medical lethality of the suicidal act may help to further refine the understanding of suicide risk. Adults who make a medically serious suicide attempt are likely to suffer from a major depressive disorder (Beautrais, 2002), and display an elevated risk for subsequent attempts and eventual death by suicide (Beautrais, 2004).

Suicide assessment often focuses on risk factors and warning signs (Rudd, 2003; Rudd et al., 2006). Risk factors typically reflect a chronic but not necessarily imminent risk of suicidal actions. Most risk factors (e.g., age, race, gender) are stable qualities that are unlikely to change, and therefore have limited implications for intervention (Brown et al., 2000). By contrast, warning signs (e.g., depression, substance abuse, writing a will) represent acute factors that reflect imminent risk of a suicidal crisis, and therefore require immediate intervention (Rudd et al., 2006).

Suicide research typically involves diagnostically heterogeneous groups of patients who have attempted or completed suicide, and many studies compare suicidal populations with non-suicidal controls. Directly comparing suicide attempters and completers may help to identify which patients are at the greatest risk of death by suicide. The present study was designed to compare suicide attempters and suicide completers on demographic factors, suicidal actions, and stressful life events that preceded the suicidal act. In order to control for psychiatric diagnoses related to suicide risk, all participants met diagnostic criteria for a Major Depressive Disorder at the time of their suicidal act. Furthermore, in order to maximize the precision of group comparisons, the suicide attempters were sub-classified according to the medical lethality of their suicide attempt. It was expected that suicide completers would display the most severe risk on measures of risk factors and warning signs.

Method

Procedures

The research protocol was approved by the University Institutional Review Board. Written informed consent was obtained from all participants. Data was collected using simple random sampling with post-stratification (Zhang, 2000), whereby participants needed to meet three core criteria: (1) adult age, (2) presence of depression, and (3) one of two types of suicidal actions, either a recent suicide attempt or death by suicide. Within these parameters, eligible adults were randomly solicited to participate in the research interviews.

Suicide attempters were identified through the inpatient unit of a private psychiatric hospital. An initial chart review was conducted to identify appropriate participants. The researchers examined the medical chart, and followed protocol guidelines to rule out dementia, mental retardation, psychosis, Bipolar Disorder, and organic brain disorder. Because the unit

specialized in acute Axis I disorders, none of the patients were diagnosed with dementia, mental retardation or organic brain syndromes. However, bipolar was sometimes diagnosed and these patients were excluded. The chart diagnosis was based on all clinical information that was available at the time of intake, including the patient's interviews with the attending psychiatrist, family interviews with the unit social worker, and observation notes made by the nursing staff. Patients were included if the chart diagnosis and the SCID-IV diagnostic interview both documented the diagnosis of a Major Depressive Disorder. Because the research was focused on suicide risk, depressed inpatients were excluded if they had been hospitalized for suicidal ideation or suicide plans but they had not actually attempted suicide. Similarly, inpatients were not included if they had planned to attempt suicide, but a friend, a family member, or a crisis rescue worker interrupted the act or prevented the attempt.

Suicide completers were identified through the county coroner's office. Relatives of the deceased subjects were recruited through the coroner's office as part of a larger ongoing study on biological factors involved in depression and suicide (Stockmeier et al., 2004). Similar to the suicide attempters, potential participants were excluded if there was any indication of mental retardation, dementia, or organic brain damage (including SIGSW to head). No cases of mental retardation were observed, but several elderly completers displayed signs of possible dementia, and were excluded from the present study. Next-of-kin of the deceased were initially contacted by telephone and the purpose and procedures of the study were explained. Approximately six to eight weeks after the passing of the deceased, the next-of-kin of the deceased was contacted by telephone. There was usually a lag of 2-8 weeks between the initial consent to participate in the research and the actual completion of the research interview. The interviews with family member informants usually lasted more than two hours, but were almost always completed in less than 3.5 hours. The wide range of interview time was influenced by the number of family members who were present during the interview, and the degree of emotional responses that were elicited during the discussion. As recommended for psychological autopsy procedures (Ebert, 1987; Hawton et al., 1998), the final diagnostic evaluation included information from the coroner's report, laboratory findings of recent substance use, suicide notes, employment history, educational attainment, and family history of psychiatric disorders. The SCID-IV interview, Suicidal Actions Checklist, and Risk-Rescue Rating Scale were completed based on information provided by family members of the suicide completers. Because the data collection was coordinated by a trained interviewer, no items were omitted from the data collection plan. Data collection extended over several years (2002-2006).

Participants

Suicide Attempters—Adult psychiatric inpatients from a local psychiatric hospital were recruited to participate in the study. The hospital is located in a suburban area of a large Midwestern city and provides services to primarily middle-class, Caucasian patients. Patients with Major Depressive Disorder who had attempted suicide prior to hospitalization were identified through an initial chart screen. A total of 223 medical charts were screened for the study in order to identify patients with a preliminary diagnosis of a Major Depressive Disorder who had recently attempted suicide. Of these charts, 68 patients met criteria for inclusion into the study. However, 13 patients declined to participate, and five patients were dropped from the analyses because we lacked sufficient information to rate the lethality of their suicide attempt. Complete data was collected on 50 psychiatric inpatients with Major Depressive Disorder who had recently attempted suicide. Twenty-nine inpatients (58%) were female, and 21 (42%) were male. The average age of the suicide attempters was 36.86 years ($SD = 11.36$). Among the 29 female suicide attempters, the average age was 37.76 ($SD = 11.23$) and their ages ranged from 18 to 62 years. Among 21 male suicide attempters, the average age was 35.62 ($SD = 11.86$) and their ages ranged from 19 to 57 years. Thirty-four inpatients (68%) had

attempted suicide by drug overdose, five (10%) attempted by self-lacerations to the wrists, four (8%) attempted by both overdose and cutting, two (4%) attempted by driving their car off the road, one (2%) attempted by CO poisoning, one (2%) attempted to die by gas asphyxiation (running their stove), one (2%) by hanging, one attempted by cutting the neck, and one (2%) attempted by lying in the street. Suicide attempts typically occurred in the patient's home (76%), or the home of a friend or family member (8%), with other common locations including a secluded wooded area (4%), alone in a hotel room (6%), or on a public street (6%).

Suicide Completers—50 adults who had died by suicide were evaluated through a lengthy interview with family member informants. The informant interviews were conducted with assorted family members, including one or both parents (38%), the spouse of the deceased person (44%), one or more siblings (26%), adult children of the deceased (14%), or adult cousins (2%). These numbers total beyond 100 percent because 42% of the interviews included multiple informants. Thirty-five (70%) of the suicide completers were male, and 15 (30%) were female. The average age of suicide completers was 43.26 ($SD=11.81$). Among the 15 female suicide completers, the average age was 43.80 ($SD = 12.52$), and their ages ranged from 19 to 63 years. Among 35 male suicide completers, the average age was 43.03 ($SD = 11.67$), and their ages ranged from 20 to 64 years. In the present sample, 20 suicide completers (40%) died by self-inflicted gunshot wound, 12 completers (24%) died by hanging, nine completers (18%) died of CO poisoning, five (10%) died of drug overdose, 2 (4%) died of self-cutting, one (2%) person died by drowning, and one died by asphyxiation. Thirty-eight (76%) of suicide completers died in their own home or garage, three (6%) died at work, three (6%) died in parking lots, two (4%) died at an outdoor park, two (4%) died at their parent's home, one (2%) drowned in a lake, and one (2%) died alone in a hotel room.

Measures

Structured Clinical Interview for DSM-IV (SCID-IV; First, Spitzer, Gibbons & Williams, 1995) was administered to the psychiatric inpatients by a doctoral level clinical psychology graduate student trained in psychiatric diagnosis and structured interviewing. First, a series of broad screening questions were asked to rule out diagnoses of mania and psychosis. After the screening questions were completed, all participants were interviewed using the depression section of the SCID-IV. The responses to the SCID-IV questions served as the basis for diagnosis of Major Depressive Disorder, and also provided detailed information regarding specific symptoms of depression. All diagnoses were made in accordance with the requirements set forth in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994). Because the interviewer had full access to each patient's psychiatric medical record, we were conduct a preliminary screening and select cases where depression was the prominent presenting problem. Then, an abbreviated SCID interview was conducted, administering all questions pertaining to a Major Depressive Episode, Dysthymic Disorder, and Bipolar Disorder in order to verify the diagnosis of a unipolar Major Depressive Disorder. In addition, the SCID general screening questions were used to evaluate the presence of the other categories of Axis I clinical syndromes. If other symptoms were noted, these secondary diagnoses were explored and documented.

The complete SCID-IV diagnostic interview was administered to the informants of the suicide completers. Items were altered to fit third-person phrasing, and the informants were asked to rate the presence or absence of the DSM-IV symptoms for the suicide completer. In accordance with psychological autopsy guidelines (Ebert, 1987), final diagnoses were reached through a consensus meeting with a board certified psychiatrist, a licensed clinical psychologist, and the clinical social worker who conducted the interviews met and reviewed all available information, including the SCID interview, the coroner's report, police records, and any available medical records. Previous psychological autopsy research has demonstrated adequate

agreement between diagnoses based on SCID interviews with family members and diagnoses derived from a review of the patient's medical records (Deep-Soboslay et al., 2005; Kelly & Mann, 1996). Furthermore, SCID diagnoses have obtained strong inter-rater agreement when two interviewers have separately rated same depressed patient (Dumais, et al., 2005) and when information from depressed patients was compared to information collected via family members (McGirr et al., 2007). Also, recent research (DeJong & Overholser, 2009) has found a strong degree of agreement between psychiatric inpatients and family member informants on the diagnosis of a Major Depressive Episode (Kappa = 1.0) as well as the individual symptoms of depression (average Kappa = .51).

Suicidal Actions Checklist is a new, clinician-rated instrument designed to obtain specific information regarding the participant's suicide attempt. The Suicidal Actions Checklist assesses suicidal behaviors, life stressors, and historical variables which seem central to suicide risk assessment (Oquendo, Halberstam, & Mann, 2003). The Suicidal Actions Checklist examines the method and details of a suicide attempt including the location of the act and whether the individual had consumed alcohol or drugs prior to the suicide attempt. The presence of stressful life events during the month preceding the suicidal act included recent divorce or marital separation, interpersonal conflict, bereavement, living alone, job stress or financial problems. The Suicidal Actions Checklist also obtains historical information regarding previous suicide attempts and past hospitalizations for psychiatric problems. The Suicidal Actions Checklist was adapted for use with family member informants to obtain information about the suicide completer. An adequate level of agreement about suicidal actions has been obtained when comparing information from suicide attempters and family member informants (DeJong & Overholser, 2009).

Risk-Rescue Rating Scale (Weisman & Worden, 1974) is an established method for assessing the lethality of suicide attempts. The Risk-Rescue Rating Scale includes five risk factors and five rescue factors that are rated by the interviewer. Evidence for the reliability of the Risk-Rescue Rating Scale has been shown through high intra-class correlation coefficients ranging from .93-.95 for the total Risk-Rescue ratings, and concurrent validity has been demonstrated via correlations with other measures of suicide lethality and suicidal outcome (Weisman & Worden, 1974). In the present study, 34 of the psychiatric patients (68%) attempted suicide by overdose. For these cases, a clinical pharmacist (PharmD) rated the toxicity of overdose as mild, moderate or severe. Four suicide attempters used multiple methods (drug overdose and self-laceration); in accordance with Weisman and Worden (1974), combinations of suicide agents were rated by the most lethal agent. Fourteen suicide attempters had higher scores on the risk factors than on the rescue factors and were considered high-lethality. The remaining 36 cases had rescue factor scores which equaled or exceeded the risk factors and were considered low-lethality attempts.

Results

Initial analyses compared 50 suicide attempters to 50 suicide completers on a variety of dependent measures. In order to focus on suicide risk that develops in the context of depression and despair, all attempters and all completers met diagnostic criteria for a Major Depressive Disorder at the time of their suicidal act. However, a significant difference between groups was observed on the lethality of the suicidal act ($\chi^2 = 51.39, p < .01$). Not surprisingly, suicide completers were more likely than attempters to use highly lethal methods in their suicidal act. Most attempters used methods of low to moderate lethality, such as drug overdose or self-laceration. A few attempters used highly lethal methods, including asphyxiation, hanging, or multiple methods combined. In contrast, most completers used highly lethal methods, including gunshot wound, hanging, and CO poisoning. Therefore, for subsequent analyses, the suicide attempters were sub-categorized into two groups based on the lethality of their suicide attempt.

High lethality and low lethality suicide attempters were compared to suicide completers on demographic variables (see Table 1). Chi-square tests were used to examine categorical variables, and one-way ANOVAs were used to compare groups on continuous variables. Suicide completers were significantly older than suicide attempters ($F = 3.98, p < .05$), and more likely to be male, whereas both groups of suicide attempters were more likely to be female ($\chi^2 = 8.46, p < .05$). Suicide attempters and completers differed on race ($\chi^2 = 7.20, p < .05$), although all three groups were predominantly White. There were no significant differences between suicide attempters and completers with regard to marital status.

High lethality and low lethality suicide attempters were compared to suicide completers on the presence of each symptom included in a Major Depressive Episode (see Table 2). Very similar patterns of depressive symptoms were observed in the suicide attempters and the suicide completers. Surprisingly, the informants of suicide completers reported suicidal ideation less often than did low-lethality attempters or high-lethality attempters.

High lethality and low lethality suicide attempters were compared to suicide completers on actions related to the suicidal crisis (see Table 3). Low-lethality and high-lethality attempters were significantly more likely than completers to have previously attempted suicide ($\chi^2 = 5.85, p = .054$) and to have previously received inpatient psychiatric treatment ($\chi^2 = 7.33, p < .05$). Suicide completers were significantly more likely to leave a suicide note than attempters ($\chi^2 = 8.37, p < .05$). Over half of the suicide completers left a suicide note, whereas approximately 20% of low-lethal and high-lethal attempters left suicide notes. Similarly, over half of the suicide completers consumed alcohol or drugs prior to the suicidal act, while fewer attempters reported consuming alcohol or drugs prior to their attempt ($\chi^2 = 6.48, p < .05$).

High lethality and low lethality suicide attempters were compared to suicide completers on stressful life events that preceded the suicidal crisis (see Table 4). As compared to both groups of suicide attempters, the suicide completers were significantly more likely to have struggled with job stress ($\chi^2 = 13.80, p < .01$) and financial problems ($\chi^2 = 12.80, p < .01$) prior to their suicidal crisis. Over half of suicide completers had encountered significant job stress and financial problems, whereas approximately one-fifth of low-lethal and high-lethal attempters reported having job stress and financial problems. Attempters and completers did not differ with regard to recent interpersonal conflict, living alone, or recent divorce or romantic break-up.

Discriminant Function Analyses

Two discriminant function analyses were calculated to determine whether the significant variables reported in Tables 2, 3, and 4 significantly contributed to the classification of cases beyond the rates obtained through demographic data. A discriminant function analysis was performed with age, race, gender and marital status. The first discriminant function was significant, Wilks' $\Lambda = .774, p = .002$. Consistent with the results of Table 2, age, race and gender were significant. Fifty-four percent of cases were classified correctly. A second discriminant function analysis was subsequently performed which included the significant demographic variables (age, race and gender) and added the significant variables from Tables 2, 3 and 4 (i.e., suicidal ideation, previous suicide attempt, previous psychiatric hospitalization, suicide note, alcohol use at the time of the suicidal act, job stress, financial stress). When all significant variables were entered, the first discriminant function was again significant, Wilks' $\Lambda = .470, p < .0001$. Sixty-seven percent of cases were classified correctly. All of the individual predictors from the first discriminant function analysis were again significant. Improvement in classification was evaluated using a procedure described in Tabachnick and Fidell (2007, page 405). The addition of the significant variables from Tables 2, 3, and 4 significantly improved the classification of cases, $F(20, 176) = 5.69, p < .0001$.

The discriminant function analysis with all significant variables accounted for 92.8% of the variance in the model and showed that the three groups (low-lethality suicide attempters, high-lethality suicide attempters, and suicide completers) could be accurately classified. The significant discriminant function had high regression coefficients on a series of factors which distinguished suicide attempters and suicide completers (suicide note, $\beta = .51$; job stress, $\beta = .51$; alcohol use at the time of the suicidal act, $\beta = .44$; financial stress, $\beta = .38$). Evaluation of the group centroids of the discriminant function indicated that both low-intent suicide attempters and high-intent suicide attempters had lower mean scores on the discriminant function ($X = -1.00$ for low-intent suicide attempters; $X = -0.90$ for high-intent suicide attempters). By contrast, the suicide completers had a higher mean score on the discriminant function ($X = .97$). Thus, the inclusion of significant suicide history and stressor variables significantly improved classification of those making a suicidal action beyond the demographic predictors alone. The second discriminant function accounted for the differences between low-intent suicide attempters, high-intent suicide attempters, and suicide completers.

Discussion

The present study evaluated 50 depressed adult psychiatric inpatients who had attempted suicide as compared to 50 depressed adults who had died by suicide. Similar to prior research (Michel, 1987), most depressive symptoms did not discriminate between suicide completers and highly lethal attempters. However, the presence and severity of depression can be very relevant to suicidal behavior. Depression usually sets the stage for a possible suicidal crisis. It is quite uncommon for patients to attempt suicide after they have recovered from their depressive episode (Rihmer, 2007).

In the present study, suicide completers were older and more likely to be male than either group of suicide attempters. Age and gender differences across groups may have influenced the findings on the other measures. However, post hoc analyses that compared subgroups of attempters and completers after matching groups on age, race and gender did not change our findings on any of our dependent measures. Also, the discriminant function analyses were able to statistically control for demographic differences across groups, and revealed the importance of historical and life stress variables in understanding suicide risk.

As compared to suicide attempters, the suicide completers were more likely to have consumed alcohol or drugs prior to their suicidal action. Alcohol consumption increases the risk of suicidal behavior (Powell et al., 2001). Similar to the present findings, previous research has found that up to 50% of completed suicides are intoxicated at the time of death (Moscicki, 2001). In the present study, fifty-two percent of suicide completers had consumed alcohol or drugs in the hours prior to their death, and this rate was significantly higher than the drug and alcohol consumption reported by the suicide attempters. Unfortunately, it was difficult to align our assessment methodology for the two distinct samples. In the present study, for the suicide completers, alcohol and drug use was assessed via blood levels measured via toxicology report, whereas for the suicide attempters, substance use was rated via the patient's self-report. Nonetheless, substance abuse is an important warning sign for completed suicide, possibly serving to impair judgment and reduce inhibitions against dangerous acts, or perhaps reflecting severe emotional struggles that have not been contained through other means.

The history of a prior psychiatric hospitalization or a previous suicide attempt were more common in both groups of suicide attempters than the suicide completers. In the present study, only 42% of suicide completers had previously attempted suicide. These rates are very similar to prior research that found 38% of suicide completers had displayed deliberate acts of self-harm (Sinclair, Harriss, Baldwin, & King, 2005). Especially among males, suicide completers often die during their first suicidal act (Fushimi, Sugawara, & Saito, 2006; Isometsa &

Lonqvist, 1998). The higher rate of prior psychiatric hospitalization and previous suicide attempts in the suicide attempters than completers has been found in other research (Beautrais, 2002), and could reflect the long-standing clinical lore that completers do not unsuccessfully attempt suicide. Instead, when completers reach a suicidal crisis, they plan their actions, make final preparations, and end their own life. However, this finding may have been biased by our sampling methods; suicide attempters were psychiatric inpatients assessed during their hospital stay, and therefore may have been more likely to have received prior inpatient care.

Similar to previous research (Fushimi et al., 2006; Leenaars et al., 1992), adults who died by suicide were significantly more likely than attempters to have written a suicide note at the time of their suicidal crisis. In the present study, more than half of the suicide completers left a note, whereas only 20% of attempters had written a note. A suicide note represents a desperate individual's final attempt to communicate with friends and family members (Leenaars, 1988). A suicide note reflects the thoughts, time, and preparation that is involved in the final stages before a person ends their own life. The preparation of a suicide note by a depressed individual is an important warning sign that signals a high degree of risk for death by suicide.

As compared to nonsuicidal depressed controls, suicide completers have been found to display higher rate of thoughts of death, dying, or suicide (McGirr et al., 2007). However, in the presented study, suicide completers displayed lower rates of suicidal ideation than reported by the suicide attempters. Many patients at high risk for suicide do not acknowledge suicidal ideation during their last assessment prior to suicide (Busch, Fawcett, & Jacobs, 2003) and many suicide completers never convey their despair to friends, family members, or health care providers (Isometsa et al., 1994). Furthermore, suicidal thoughts are an internal process of distress and despair not visible to friends or family members.

The most common stressful life events associated with completed suicide in affective disorders include interpersonal loss or conflicts, financial problems, and job problems (Heikkinen, Isometsa, Marttunen, Aro, & Lonqvist, 1995). In the present study, both attempters and completers were likely to experience similar levels of interpersonal conflict and romantic break-ups. Recent bereavement was fairly uncommon, and did not seem to pose a risk for suicidal actions in any of the three groups. However, suicide completers were more likely to experience financial problems and occupational stress as compared to either group of suicide attempter. Depressed individuals who face job stress or financial problems are at elevated risk of completing suicide. When confronted with significant occupational stress and financial problems, a desperate individual may perceive themselves as ineffective and a burden on other people. The presence of significant job conflict and financial problems reflects a high risk for suicide with depressed patients. The danger of suicide looms strong due to current economic crisis and the higher incidence of occupational stress and financial struggles.

Limitations of Research on Suicide Completers

It is often assumed that attempters and completers represent the same group of individuals who were assessed at different points along the pathway towards suicide. However, few studies have been able to compare suicide completers with suicide attempters, because few investigators have access to both populations. Research that directly compares completers with attempters becomes complicated by the reliance on different assessment procedures. Completers are not available to answer interview questions or complete self-report questionnaires. Thus, the assessment of suicide completers typically relies on medical records or information obtained through interviews with family members. In the process, direct comparisons become a bit disjointed. For some measures, the process requires “comparing apples to oranges” whereby patient self-report is compared to informant observations. However, based on the present findings, and the many similarities between attempters and completers, it seems best to move away from an “apples to oranges” perspective, and perhaps

admit that suicide attempters and completers seem aligned to comparing red apples to green apples, the same botanical genus just different species, similar in many ways while respecting some important, subtle differences. It seems best to focus on the strong similarities between attempters and completers, as similar, overlapping groups (Beautrais, 2001).

In the present study, self-reports from suicide attempters were compared to interviews with family members of suicide completers. Despite these differences in methodology, several similar studies have shown adequate agreement when comparing proxy-based data to data obtained via self-report or chart review (Dumais et al., 2005; Conner, Conwell & Duberstein, 2001; Conner, Duberstein & Conwell, 2001; DeJong & Overholser, 2009; Kelly & Mann, 1996; McGirr et al., 2007; Zhang et al., 2003). The study of completed suicide will be restricted in its methods but has been supported by research indicating consistency between informant-report and self-report.

The present study provides evidence that suicide attempters and suicide completers are similar in many ways. However, differences between these two groups were observed on the presence of job stress, financial problems, substance use, and the likelihood of writing a suicide note. Future research may be able to refine the identification of warning signs that are specific to suicide completion.

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Table 1

Comparison of low-lethality suicide attempters ($n = 36$), high-lethality suicide attempters ($n = 14$), and suicide completers ($n = 50$) on demographic variables.

Variable	Low-lethality attempters	High-lethality attempters	Completers	Test Statistic
Age				
M	36.19 ^a	38.57 ^{ab}	43.26 ^b	$F = 3.98^*$
SD	11.37	11.82	11.81	
Race				
% White	97.00	100.00	82.00	$\chi^2 = 7.20^*$
% African-American	3.00	0.00	18.00	
Gender				
% Female	61.00	50.00	30.00	$\chi^2 = 8.46^*$
% Male	39.00	50.00	70.00	
Marital Status				
% Single	36.10	21.40	32.00	$\chi^2 = 5.46$ (ns)
% Married	38.90	28.60	40.00	
% Separated	11.10	14.30	16.00	
% Divorced	13.90	35.70	12.00	

* $p < .05$. For ANOVA with $p < .05$, means with different superscript letters were significantly different using Tukey's post hoc test ($p < .05$).

Table 2

Comparison of low-lethality suicide attempters ($n = 36$), high-lethality suicide attempters ($n = 14$), and suicide completers ($n = 50$) on symptoms of major depression.

Variable	Low-lethality attempters	High-lethality attempters	Completers	Test Statistic
Depressed mood (% yes)	97	100	100	$\chi^2 = 1.80$, ns
Anhedonia (% yes)	92	85	88	$\chi^2 = 0.47$, ns
Change in Sleep (% yes)	41	42	56	$\chi^2 = 1.97$, ns
Change in Appetite (% yes)	69	85	68	$\chi^2 = 1.73$, ns
Psychomotor agitation or retardation (% yes)	56	50	56	$\chi^2 = 0.17$, ns
Fatigue (% yes)	70	78	82	$\chi^2 = 1.89$, ns
Guilt/worthlessness (% yes)	81	100	82	$\chi^2 = 3.13$, ns
Concentration (% yes)	83	100	78	$\chi^2 = 3.76$, ns
Suicidal Ideation (% yes)	100	100	82	$\chi^2 = 9.89^{**}$
Number of Depressive Symptoms	M	7.43	6.98	F = 0.92, ns
	SD	1.09	1.36	

**
 $p < .01$

Table 3

Comparison of low-lethality suicide attempters ($n = 36$), high-lethality suicide attempters ($n = 14$), and suicide completers ($n = 50$) on suicide related variables.

Variable	Low-lethality attempters	High-lethality attempters	Completers	χ^2 statistic
Previous psychiatric hospitalization (% yes)	69	79	46	7.33*
Previous suicide attempt (% yes)	50	79	42	5.85*
Drug or alcohol use prior to suicidal action (% yes)	25	36	52	6.48*
Suicide note (% yes)	19	21	52	8.37*

*
 $p \leq .05$

Table 4

Comparison of low-lethality suicide attempters ($n = 36$), high-lethality suicide attempters ($n = 14$), and suicide completers ($n = 50$) on stressors

Variable	Low-lethality attempters	High-lethality attempters	Completers	χ^2 statistic
Bereavement (% yes)	6	0	6	0.87, ns
Financial stress (% yes)	19	14	52	12.80**
Job stress (% yes)	19	21	56	13.80**
Divorce or relationship breakup (% yes)	19	29	38	3.45, ns
Interpersonal conflict (% yes)	69	64	64	0.30, ns
Live alone (% yes)	42	21	28	2.63, ns

**
 $p < .01$