Abstract. A study of the content of suicide notes from attempted suicides and completed suicides was conducted using the Linguistic Inquiry and Word Count (LIWC) text analysis program. Notes from completed suicides had fewer metaphysical references, more future tense verbs, more social references (to others) and more positive emotions than did the notes from attempted suicides. The implications of these results were discussed.

Keywords: completed suicide, attempted suicide, suicide notes, linguistic analysis

The motivations of those who complete suicide (that is, those who die as a result of the act) and those who attempt suicide (that is, those who survive the act) have always been assumed to be quite different. In their classic book on attempted suicide, Farberow and Shneidman (1961) made this assumption explicit by calling the book “The Cry For Help.” Attempting suicide was viewed as a way of communicating distress to significant others, a cry for help.

On the other hand, completed suicides and attempted suicides appear to differ in psychological and psychiatric characteristics only in the degree of the characteristic assessed. For example, Lester, Beck, and Trexler (1975) found that the level of depression and hopelessness, as measured by objective self-report inventories, increased as the suicidal intent of the suicide attempters increased, and those who subsequently completed suicide in the follow-up period resembled the attempters with the greatest suicidal intent.

A common way of describing the differences and similarities of attempted and completed suicides is to portray the two groups as two overlapping circles (Maris, Berman, & Silverman, 2000). Some attempters and completers are similar (the overlapping parts of the two circles), while some of each group are quite different from each other (the nonoverlapping parts of the two circles).

One possible way of examining the differences in suicidal motivation of attempted and completed suicides would be to compare the suicide notes that they leave. However, whereas the suicide notes of completed suicides are always kept by the police and medical examiner for purposes of certifying the mode of death, the suicide notes left by attempters are typically destroyed (usually by the suicide attempters themselves or by their significant others) since there is no need to preserve evidence for a criminal investigation.

The present study takes advantage of samples of suicide notes collected from attempted suicides. The sample was obtained by a police officer in the United States called to the scenes of the events and who purposely looked for and preserved any suicide notes written by the suicide attempters. In a previous study of these notes, subjective evaluations of the motives expressed in the notes left by the attempted suicides were compared with those in the notes left by completed suicides in the same town. Brevard, Lester, and Yang (1990) found that both sets of notes were similar in the desire to escape from pain and the presence of anger directed toward others. The notes from the completed suicides, however, had more self-blame than the notes from the attempters.

The present study compared the notes left by attempters and completers using text analysis. The notes were examined by a computer program written to make exact counts of particular kinds of words. Pennebaker, Francis, and Booth (2001) have developed a text analysis program (known as LIWC – Linguistic Inquiry and Word Count) that analyzes written text on a word-by-word basis for over 70 language dimensions. The program can count pronouns (for example, “I” and “me” versus “us” and “our”), emotional words (negative vs. positive) and particular words (such as “death”).

The present study also examined whether any differences between the notes from completed and attempted suicides persist after controlling for the sex and age of the note writer, an important statistical control since samples of completed suicides tend to be older than samples of attempted suicides and to consist of a greater proportion of males.
Method

The material for the study consisted of 20 consecutive suicide notes from completed suicides and 20 consecutive notes from attempted suicides obtained from the same town during the same time period. The notes were collected by one police officer. The 20 completed suicides consisted of 12 males and 8 females with an age range of 19 to 67 (median 35). The 20 attempted suicides consisted of 7 males and 13 females with an age range of 13 to 70 (median 32). The suicidal acts of the attempters were of varying degree of lethality, which, however, was not assessed.

The use of solid, liquid, and gas substances for suicide was categorized as a passive method for suicide, while all other methods were categorized as active methods. For the completed suicides, 18 used active methods and 2 used passive methods; for the attempted suicides, 10 used passive methods, 3 used active methods, and 7 had no data on the method used.

The 40 suicide notes were examined by the LIWC program (Pennebaker & King, 1999; Pennebaker et al., 2001) for 76 variables (see Pennebaker, et al., 2001 for a listing of the variables).

Results

The notes from completers and attempters differed at the 5% level of statistical significance or better for five variables. Clearly, this number of significant differences is not greater than would be expected by chance in 95 comparisons. The notes from completed suicides had more references to second persons (e.g., “you”), hearing (e.g., “listen”), other references to people (e.g., 2nd or 3rd person pronouns), and future tense verbs; and fewer references to inclusive space (e.g., “with” or “include”) and metaphysical issues (e.g., “God” or “Heaven”).

Since the sample of attempters contained more females than the sample of completers, sex differences in the notes were examined. Only three significant differences by sex were identified: females wrote fewer words, had more negations, and had more present tense verbs. These differences were different from those identified for differences by outcome (attempters vs. completers).*

In order to control for the effects of sex, two-way ANOVAs (outcome by sex) were computed for each variable. The results are shown in Table 1. There were now 11 main effects for outcome (attempters vs. completers). The five significant differences found in the one-way comparisons were also found in the two-way comparisons. In addition, six new differences were identified: The notes from completers had more positive emotions (such as “happy”), more social references (e.g., to friends), and more references to time (such as “hour”), school, and religion.

In a simple correlational analysis, six differences were found by age. Age correlated positively with words per sentence (Pearson $r = 0.32$, two-tailed $p = .05$), words to do with “up” ($r = 0.35$, $p = .03$), money ($r = 0.40$, $p = .01$), religion ($r = 0.49$, $p = .001$), physical states and functions ($r = 0.37$, $p = .02$), and body states and functions ($r = 0.43$, $p = .006$). The variables involved in these associations were quite different from those found for differences by outcome and by sex. Thus, age does not appear to be a confounding factor in the differences by outcome.

* Only two differences by active versus passive method were identified: The notes from those using active methods had fewer references to motion and to “up.”

Table 1. Study 1: differences (means) between the notes from completers and attempters in two-way ANOVAs for outcome by sex

<table>
<thead>
<tr>
<th>LIWC Variable</th>
<th>Examples</th>
<th>Attempters</th>
<th>Completers</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>you</td>
<td>you, you’ll</td>
<td>1.90</td>
<td>3.25</td>
<td>3.85</td>
<td>6.23</td>
</tr>
<tr>
<td>pos emotions</td>
<td>happy, good</td>
<td>3.54</td>
<td>3.56</td>
<td>4.11</td>
<td>7.14</td>
</tr>
<tr>
<td>hearing</td>
<td>listen, heard</td>
<td>0.24</td>
<td>0.22</td>
<td>0.91</td>
<td>0.70</td>
</tr>
<tr>
<td>social</td>
<td>friend, us</td>
<td>7.68</td>
<td>8.50</td>
<td>9.95</td>
<td>12.56</td>
</tr>
<tr>
<td>refs to people</td>
<td>Sheila</td>
<td>3.89</td>
<td>5.26</td>
<td>6.08</td>
<td>8.65</td>
</tr>
<tr>
<td>time</td>
<td>day, hour</td>
<td>5.04</td>
<td>3.26</td>
<td>2.14</td>
<td>2.30</td>
</tr>
<tr>
<td>future tense</td>
<td>will, might</td>
<td>0.70</td>
<td>1.98</td>
<td>3.07</td>
<td>3.38</td>
</tr>
<tr>
<td>inclusive</td>
<td>with, include</td>
<td>6.84</td>
<td>6.53</td>
<td>5.46</td>
<td>4.36</td>
</tr>
<tr>
<td>school</td>
<td>student, class</td>
<td>0.01</td>
<td>0.15</td>
<td>0.20</td>
<td>0.44</td>
</tr>
<tr>
<td>metaphysical</td>
<td>coffin, heaven</td>
<td>2.73</td>
<td>1.56</td>
<td>0.90</td>
<td>0.80</td>
</tr>
<tr>
<td>religion</td>
<td>church, God</td>
<td>1.61</td>
<td>0.39</td>
<td>0.11</td>
<td>0.25</td>
</tr>
</tbody>
</table>

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Discussion

In this study, based on suicide notes from one community in the United States, since the word count did not differentiate the notes from attempted and completed suicides, the analyses did not need to be corrected for the length of the suicide notes. After controlling for sex, 11 differences were found between the suicide notes written by completers and attempters. Some differences, such as completers making a higher number of references indicative to hearing, do not have an obvious explanation. However, there are certain differences that may be meaningful. For example, suicidal individuals made fewer references to inclusive space than attempters, which means that completers used a fewer amount of words, such as “with” or “include.” This may demonstrate isolation, and a lack of belongingness. Durkheim (1951) posited that some individuals die from suicide because of a failure to integrate into society, and Joiner’s (2005) theory of suicide proposed that lack of belongingness was a necessary precursor to suicide.

Another interesting difference is that suicide completers used a fewer number of metaphysical references; this may be indicative of the state of “cognitive deconstruction” as described in Baumeister’s (1995) escape theory of suicide.

Interestingly, the suicide notes from the attempted suicides indicated greater distress. These notes had fewer positive emotions (a surprising finding), fewer social references, fewer future tense verbs, and more metaphysical references. These differences suggest that the attempted suicides were in greater psychic pain and more concerned with their own present condition and less concerned with others.

These results are limited by the small sample size, and the study needs to be replicated in other communities and with larger samples of notes. However, the present sample of notes from attempted suicides is the only one presently available for research in the United States, and the present study may be useful as a source of hypotheses for future research into suicide notes.

References


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