The Effectiveness of Expressive Writing as a Reductor of Psychological Distress

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Abstract

This experimental study aims to test the effectiveness of expressive writing to reduce psychological distress. The hypothesis stated that the expressive writing is effective in reducing the level of psychological distress. The design of this quasi-experiment was between-subject design. Furthermore, within-subject design was used for the control and the experimental group respectively. The research subjects were 37 students (7 male students and 30 female students). The experimental group was tasked to do expressive writing. Data analysis using independent sample t-test showed no significant difference between experimental and control group regarding the psychological distress decrease (p=0.607). Thus, the hypothesis was not supported. The results of further analysis by Wilcoxon test of the experimental group stated that expressive writing is effective for reducing psychological distress (p_{control}=0.106>0.05; p_{exp}=0.006<0.05).

Keywords—expressive writing, psychological distress

1. Introduction

People experience stress during life (Pennebaker, 1997). The result of Indonesian National Health Ministry research in 2013 showed that the Indonesian population of 14 million experienced mental disorders with symptoms of anxiety and depression (www.depkes.go.id). Danardi (2015) argued that the stress is caused by external pressure and it potentially raises the loss for the country and should be handled (www.print.kompas.com).

Stress condition occurs when individuals are not able to encounter the demands from the environment (Angola & Ongasi, 2009). Response to stress is influenced by individual appraisal to the stressor (Masse et al, 1998; Kessler, 1979). Negative appraisal leads to distress condition, while positive appraisal leads to eustress (Looker & Gregson, 2004; Matthew, 2007). Furthermore, distress is influenced by social-economic status, personality types, and the ability of individuals (Crawford & Henry, 2003; Kessler, 1979; Looker & Gregson, 2004).

For the first time, Seyle (1974) used the term “distress” in a biological context. In its development, the term distress was used in many fields, such as health, economics, and psychology (Aitken, 1975; Campbell, 2011; Ulrich, 2010; Weinberg, 2009). Basically, its term refers to the subjective unpleasant state due to the stressor. The term psychological distress that is used in the study refers to the subjective condition that threatens individual’s subjective well-being due to their psychological stressor (Payton, 2009; Singer et al, 1996).

Early adulthood (18-40 years) and middle age (40-65 years) are groups that experience the most stress (Falci, 2006; Papalia, 2008). Stress in early adulthood and middle adulthood happens due to the complexity of the life-span development demands (Papalia, 2008; Santrock, 2008). The demands followed by a negative judgment or appraisal makes a state of psychological distress and causes the decrease of individual productivity (Falci, 2006).

It is important to identify effective and economical way to deal with psychological distress condition. Pennebaker (1979) found that writing emotional things for 15-20 minutes in 3-5 consecutive day has multiple benefits. This method is called the expressive writing (EW). The study found that EW affects cognitive processes, emotional, and social aspects of individuals (Klein & Boals, 2001; Booth & Pennebaker, 1997; Leopore & Greenberg, 2002). Further study also found that EW was effective to reduce psychological distress in mothers with infants who were treated in Neonatal Intensive Care Unit (NICU) (Barry & Singer, 2001). Psychological distress was also successfully reduced by EW through the media blog (Baker & Moore, 2008).

The success of EW in reducing psychological distress is caused by the cathartic process that includes event
recognition (King, 2001; Pennebaker & Graybeal, 2011). From the existing research, this research is interested in testing the effectiveness of EW for reducing psychological distress in the 6th semester students that lived in Sanata Dharma Student Residence. The interest of the researcher cannot be separated from the flexibility and confidentiality through the EW process.

A. Objectives
The study aims to test the effectiveness of expressive writing (EW) in reducing psychological distress (PD).

B. Psychological Distress (PD)
The term psychological distress (PD) arose when Seyle (1974) found two different kinds of responses to the stressor. Individual response to the stressor is subjective (and Kopin Goldstein, 2007; Lazarus & Folkman, 1984; Mattew, 2000). When individual assesses a stressor positively, then the individual is in a state of eustress. Eustress conditions triggers individual to become more creative. On the other hand, when the individual gives a negative assessment to the stressor, they will be in a state of distress (Goldstein & Kopin, 2007; Kessler, 1979). The researcher concluded that PD is a threatening and uncomfortable condition in a certain time because of the negative perception to the situation or demands.

C. Expressive Writing (EW)
Expressive Writing (EW) was triggered by Pennebaker (1989). This paradigm believes that writing about emotional events for 15-20 minutes for 3-5 consecutive days have many benefits such as reducing or healing trauma (Betten et al, 2002), increase academic achievement (Ramirez & Bailoc, 2011), and improve the immunity system (Booth & Pennebaker, 1997). Expressive writing (EW) also proved to be effective to reduce the level of PD (Barry & Singer, 2001). Psychological distress was also successfully reduced by EW through the media blog (Baker & Moore, 2008).

Cathartic process is a predictor behind the effectiveness of EW that includes cognitive processes in the form of recognition events while writing (King, 2001). The process is often called a cathartic emotional storytelling (Synder, 2011). In the writing process, the individual releases buried negative emotions and reconstruct the events, thus creating and increasing awareness (Niederhoffer & Pennebaker, 2006). Client’s mindset will become more adaptive after that, so they have a new perspective to see an event (Beck et al in Pennebaker, 2003).

EW administration is very flexible. Individual can choose to do EW every day or give a consistent pause (Berry, 2001). The instructions of EW always develop. King (2000) found that writing down a specific or thematic topic has the same benefits with writing about general topic (King, 2000). By writing a specific topic, people find more constructive and reasonable stories, so there is a belief and optimism when the individual is faced with similar events (King, 2000).

D. Hypothesis
The hypothesis of this study is that there are significant differences in decreased levels of psychological distress between the control group and the experimental group.

2. Method

A. Types of Research
Researcher used a quasi-experiment to see the effectiveness of expressive writing in a natural setting (Solso, 2008). To see the effectiveness, researcher used a between-subject design to gain score test for control and experimental groups. For the further method, within-subject design was used by doing the pre-and post-tests in both groups (Myers & Hansen, 2002). Experimental group was assigned to do expressive writing during 5 consecutive days with 20 minutes/day. While the control group did nothing in this experiment.

B. Variables
The dependent variables tested in this study was psychological distress (PD). Psychological distress was defined as a threat and discomfort state that occurs when individuals have a negative perception or interpretation toward a task or problem. Psychological distress condition was characterized by symptoms of depression, anxiety, and stress as measured by DASS scale.

Expressive writing (EW) is the independent variable. Expressive writing is an activity that requires subjects to write about their deepest thoughts and feelings about the most emotional event when the subject had too much tasks or problems in their life. The duration of EW is 20 minutes for 5 consecutive days. Subject does not need to pay attention to grammar, choice of words, writing, punctuation, and spelling.

C. Subjects
Subjects of this research were non-Psychology students in the sixth semester of Sanata Dharma University who lived in the Student Residence Paingan and Mirican. There were 37 students, which consist of 7 males and 30 females. Subjects were randomly assigned into a control (M = 3, F = 14) and experimental (M = 4; F = 16) groups.

D. Measurement
Distress, Anxiety, and Depression Scale (DASS) in the Indonesian version was used as a tool to measure PD. DASS scale was tested again and the result showed an Alpha Cronbach of (α) = 0.923 as the reliability coefficient. There were 41 out of 42 items that were used. Item number 15 was undermined because its item-total correlations was 0.20 <0.30
Table 1. DASS Categorization

<table>
<thead>
<tr>
<th>Score</th>
<th>Categorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30</td>
<td>Normal</td>
</tr>
<tr>
<td>30-40</td>
<td>Mild</td>
</tr>
<tr>
<td>40-60</td>
<td>Moderate</td>
</tr>
<tr>
<td>60-70</td>
<td>Severe</td>
</tr>
<tr>
<td>&gt;70</td>
<td>Extremely Severe</td>
</tr>
</tbody>
</table>

E. Data Analysis

T-test was used to measure the differences between two groups. T-test was used to test differences in two groups based on the mean difference before and after being treated (Santoso, 2012; 2014). Independent sample t-test was used to test between-subject design. For further analysis, the researcher used paired-sample t-test.

3. Result and Discussion

A. Pilot Study

Pilot study was conducted on Thursday - Friday, 28-29 May 2016 at 18:30 pm until 19:00 pm in the Observation Room of Sanata Dharma University. Subjects of pilot study were non-Psychology students in their 6th semester, which consist of 6 male and 6 females. The pilot study aimed to examine the effectiveness of EW instruction. Based on the results of the pilot study, the researcher decided to use thematic instruction. This decision was taken because all subjects who received instruction to write thematic events could tell more specific PD events and provide a solution to solve or cope with the problem. Researcher also decided to increase the duration of EW to 20 minutes. Below was the thematic instruction of EW:


B. Result

Shapiro-Wilk was used to test normality because the data was less than 50. Normality test for the control group’s gained score was significant, thus the researcher continued with independent sample t-test.

Table 2. Test of Normality

<table>
<thead>
<tr>
<th>Data</th>
<th>Group</th>
<th>Shapiro-Wilk Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Score</td>
<td>Control</td>
<td>.906</td>
<td>17</td>
<td>.087</td>
</tr>
</tbody>
</table>

T-test showed that there were no significant differences in the decrease level of PD between control and experimental group (p = .607>.05). Furthermore, researcher conducted a normality test for pre-test and post-test for each group. Normality test for pre-test of experimental group was not significant (.021 <.05), thus researcher continued to test with non-parametric statistic: Wilcoxon (Santoso, 2014). Based on Wilcoxon test, there were significant differences in decreased levels of PD before and after given EW treatment in the experimental group (pcontrol = .106; pexp = .006).

4. Discussion

Independent Sample T-test. Previous research concluded that EW is effective in reducing the level of PD (Baikie & Wilhelm, 2002; Pennebaker, 1997; Tavakolli, 2009). The results of the analysis using t-test for control and experimental group’s gained score showed no significant difference in the rate of PD decline (p = .607>.05). That is, the EW treatment was not effective for lowering the level of PD.

The results of the study were not in accordance with previous studies although researchers found a trend, which was that subjects of experimental group have more decreased PD level category than the control group. Category experienced a decline of 50% from the total of 20 subjects. On the other hand, only 11.76% of the subjects of the control group who experienced a decrease in PD category.

Table 3. Categorization of Pre and Post-Test for Control and Experiment Group

<table>
<thead>
<tr>
<th>Subject</th>
<th>Control</th>
<th>Post</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22</td>
<td>28</td>
<td>Normal</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>2</td>
<td>Normal</td>
</tr>
<tr>
<td>3</td>
<td>23</td>
<td>22</td>
<td>Normal</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>13</td>
<td>Normal</td>
</tr>
<tr>
<td>5</td>
<td>38</td>
<td>22</td>
<td>Normal</td>
</tr>
<tr>
<td>6</td>
<td>29</td>
<td>33</td>
<td>Mild</td>
</tr>
<tr>
<td>7</td>
<td>56</td>
<td>46</td>
<td>Moderate</td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>12</td>
<td>Normal</td>
</tr>
<tr>
<td>9</td>
<td>39</td>
<td>35</td>
<td>Mild</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>14</td>
<td>Normal</td>
</tr>
<tr>
<td>11</td>
<td>34</td>
<td>33</td>
<td>Mild</td>
</tr>
<tr>
<td>12</td>
<td>28</td>
<td>29</td>
<td>Normal</td>
</tr>
</tbody>
</table>
Researchers used self-report to measure the level of psychological distress. Smith (1996 in Pennebaker, 1997) found inconsistencies EW effect to decrease the level of PD. The inconsistency appears on studies using self-report methods that always have limitations such as the possibility to fake. In this study, subjects from both groups may provide fake answers, therefore the results of this research were incompatible with previous studies.

Wilcoxon Test: distress (Baikie & Wilhelm, 2002; Pennebaker, 1997; Tavakoli, 2009). Result of further analysis with paired sample t-test (Wilcoxon test) for each group confirmed previous research. Expressive writing was effective to reduce PD level in the experimental group (.006 > .05) by EW for 5 days. However, the group control showed no change in the level of PD' significance decrease when compared to the experimental group (.106 > .05).

The effectiveness of EW to reduce PD is in accordance with previous studies, which stated that EW is effective in reducing PD on a mother whose son was treated in the Neonatal Intensive Care Unit (NICU) (Barry & Singer, 2001). In this study, PD was reduced because the subject was conscious that she had made it through the event well (King, 2000; Pennebaker and Seagal, 1999). This theory supports the statement of the subject saying that some of them became aware of their actions and the response to an event.

The success of the study is in line with reports of success EW to reduce PD through the media blog (Baker & Moore, 2008). Davidson et al. (2000) and Major et al. (2002) explains that EW is the process of releasing the negative emotions that make a person more relieved. Researcher noted several statements supporting previous research, which was that the subject was relieved after disclosing their problem through writing. Researcher found that the thematic instruction affects the success of the study. Thematic instructions encourage subjects to write down the events that trigger PD in a coherent and detailed manner. King (2000) says thematic instruction is able to make the subject recall and recognize the experience (King, 2000; Pennebaker and Seagal, 1999).

Previous research lasted for 3-4 days with a duration of 20 minutes/day (Baikie & Wilhelm, 2005; Leopoor & Greenberg, 2002; Snyder et al. 2004; Tavakoli, 2009). This study lasted for 5 consecutive days and the results were significant. These results were consistent with previous theory, which stated that the EW interval is very flexible, as well as the place and time (Berry, 2001; Chung & Pennebaker, 2008).

The study also proved that one of EW's strengths is a free cultural bias procedure (Pennebaker and Graybell, 2011; Pennebaker, 2004; Pennebaker, 1997; Sherlock and Pennebaker, 2003). This was supported by EW study involving subjects from different tribes and races with significant results (Tavakoli, 2009). This study included subjects who were mostly from the eastern Indonesian region (Flores, Ende, and Papua). Previous theory stated that EW is effective to reduce PD from various cultural backgrounds.

Incompatibility research results were caused by several things. First, subjects were less precise. Bootzin (1997) found that EW is not effective when it does not find a proper subject. Expressive writing becomes ineffective when it does not find a subject with PD above normal. The researchers concluded that the subjects in this study were not sensitive to EW treatment because they do not have a high enough PD.

Second, Bootzin (1997) also revealed that EW is not effective when subjects with PD levels already have effective coping strategies. In this study, researcher did not control the coping strategies variables and making it appear likely that subjects in both groups experienced decreased levels of PD because of their ability to cope.

Researcher strengthened the method with parametric analysis. Parametric analysis is more rigorous and detailed than the non-parametric statistics (Santoso, 2013), thus when comparing the results, differences in the rate of PD decline between the two groups were bigger.

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backgrounds (Berry et al., 2001; Harris, 2006; Regan, 2005; Rivkin et al., 2006; Rosenberg et al., 2002; Stanton and Burg, 2002 in Baikie and Wilhem, 2005; Tavakoli, 2009), this theory supports the results of study that use various major students from Sanata Dharma University as subjects.

5. Conclusion

The result showed that expressive writing (EW) does not effectively reduce psychological distress (PD). Conclusions were derived from the results of independent sample t-test on the control and experimental group’s gained score. Statistical analysis produces give $p = .607 > .05$. When tested using the loose method, expressive writing was proved to reduce psychological distress as evidenced by scores of pre-test and post-test of two group that shows $p = .006 > .05$. This conclusion was reinforced by the pre-test and post-test difference test in the control group that showed no difference in the level of psychological distress ($p = .106 > .05$).

This study has several advantages over previous studies. First, as far as the researcher searched, experiment using expressive writing (EW) to reduce psychological distress has never been done in Indonesia. Thus, this study has potential contribution to the preventive, curative, and promotion in improving mental health in Indonesia, especially for students. Second, the subjects from tryout up to the study were non-Psychology students. The selection of non-Psychology subjects provided bigger opportunities to generalize this result to larger population. Third, the control group in this experiment was not given any treatments. This is a form of improvement from previous studies that gave tasks for the control group. Fourth, researcher found that EW does not work on the subject with low PD. For further studies, researcher should use EW method to subjects with specific clinical disorders, such as trauma or anxiety. If the next researcher wants to develop research or experiment about EW and PD, they should look for subject with high level of distress.

There are many limitations in this study. There was too much mortality rate of the subject, thus the number of subjects became too small. The gender composition of each group and the subjects’ comparison in this study are not balanced. Although this study did not focus on gender differences, the composition of the subjects could be considered for further research because it has the possibility to influence the results.

Another limitation is the different field of this study. Researcher found different style of leadership and communication from officials to students in both places. Methodically, further research is expected to apply a matching-subject to evenly distribute subjects in accordance with the level of PD. This study also does not consider a waiting list group. The waiting list group is a control group that received the same treatment with the experimental group after the experiment is over when an applied treatment brings positive results.

References


