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RESEARCH ARTICLE

USING BRIEF COGNITIVE RESTRUCTURING AND COGNITIVE DEFUSION TECHNIQUES TO COPE WITH NEGATIVE THOUGHTS

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ABSTRACT

This study aimed to compare the effectiveness of using brief cognitive restructuring and cognitive defusion techniques in coping with negative thoughts of college students of Laguna State Polytechnic University. The study used quasi experimental design and assigned thirty respondents in the group which was treated with cognitive restructuring and another thirty respondents in the group that was treated with cognitive defusion. t-test was used to test for the significant difference. Based from the findings of the study, there is significant difference between the mean scores of the pre-test and post-test of the restructuring group. Also, there is significant difference between the mean scores of the pre-test and post-test of the defusion group. Furthermore, mean score of the defusion group is significantly different with the mean score of restructuring group in terms of the post-test but in terms of pre-test, the mean scores of the two groups do not differ significantly.

KEYWORDS

Cognitive Defusion, Cognitive Restructuring, Negative Thoughts

1. INTRODUCTION

According to a study, people all have days where they feel like a dark cloud is following them around and that's normal [1]. If they're a glass-half-full kind of person, they might bounce back to seeing the sunshine pretty quickly. Unfortunately, far too many of them get stuck in what seems like a never-ending thunderstorm of negative thoughts and worries. Left unchecked, these thought patterns can lead them down a spiral straight to anxiety and depression. Hence, the bad news is that science has determined that unhealthy thinking patterns largely contribute to mental health conditions. Negative thought patterns can play a big role in causing and worsening depression and anxiety.

Furthermore, negative thoughts are cognitions about the self, others, or the world in general that are characterized by negative perceptions, expectations, and attributions and are associated with unpleasant emotions and adverse behavioral, physiological, and health outcomes [2]. Cognitive models of psychopathology posit that dysfunctional cognitions directly contribute to negative emotions [3]. Accordingly, a common technique in traditional cognitive behavioral therapy (CBT) is cognitive restructuring, in which the therapist and patient collaboratively identify irrational or maladaptive thoughts and challenge their veracity using strategies such as logical disputation, Socratic questioning, and behavioral experiments [4]. The goal of this process is to encourage patients to think in more accurate and adaptive ways, which facilitate effective problem solving and living a more satisfying life [5].

CBT consists of various techniques, however, and the specific contribution of cognitive restructuring to the overall efficacy of CBT has recently come under scrutiny. In their review of treatment studies for anxiety and depression that cognitive interventions do not consistently provide added value to behavioral interventions [6]. Cognitive restructuring has also been criticized on theoretical grounds by proponents of mindfulness and acceptance-based approaches such as acceptance and commitment therapy [7]. Cognitive therapists have vigorously disputed the notion that cognitive restructuring encourages the suppression and avoidance of negative thoughts and emphasize the contradiction between the negative depiction of cognitive restructuring by ACT proponents and the observation that cognitive therapy is "the most clearly established effective psychotherapy that exists" [8].

Nevertheless, a cardinal feature of "third wave" approaches is their marked departure from traditional CBT approaches toward negative thoughts [9]. Rather than directly challenge the *content* (e.g., accuracy) of negative thoughts, these methods emphasize changing the *function* of thoughts by encouraging patients to adopt a different awareness of and relationship to thoughts [10]. ACT is a type of therapy that helps in changing the relationship with negative thoughts and feelings, so they can engage in meaningful actions that line up with their values [11]. Various "cognitive defusion" techniques teach patients to see the "bad thought as a thought, no more, no less" and to refrain from trying to change thought content or responding to dysfunctional thoughts with experiential avoidance [7]. This approach is designed to circumvent the struggle to more effectively regulate negative emotions by abandoning the agenda of emotion regulation itself [12].

One of the many cognitive defusion techniques in ACT consists of having the patient rapidly speak a negative self-referential word (e.g., "fat") until the word appears to lose its literal meaning. Known as the "milk exercise," this technique was first studied by experimental psychologists a century ago and was a frequent topic of investigation in the mid-1900s under the label "semantic satiation" [5]. Numerous studies demonstrated that

continuous, fast verbal repetition of a word produced a temporary decrease or loss in the word's meaning [5]. This study aimed to compare the effectiveness of using brief cognitive restructuring and cognitive defusion techniques in coping with negative thoughts of college students in Laguna State Polytechnic University and to design an intervention program to teach students and employees of the school on how to use cognitive defusion to cope up with negative thoughts.

2. STATEMENT OF THE PROBLEM

The aimed to determine the effectiveness of brief cognitive restructuring and cognitive defusion to cope with negative thoughts and to compare them. Specifically, it sought to answer the following questions: 1. What are the mean scores of the pre-test and post-test of the restructuring and defusion groups? 2. Is there a significant difference between the mean scores of the pre-test and post-test of the restructuring group? 3. Is there a significant difference between the mean scores of the pre-test and post-test of the defusion group? 4. Is there a significant difference between the mean scores of the pre-test of the restructuring group and defusion group? 5. Is there a significant difference between the mean scores of the post-test of the restructuring group and defusion group?

3. METHODOLOGY

The study used quasi experimental design to determine the effectiveness of using brief cognitive restructuring and cognitive defusion techniques to cope with negative thoughts. It selected sixty (60) respondents from the first year BS Business Administration students of the Laguna State Polytechnic University, San Pablo City campus through random sampling technique. Thirty (30) respondents were assigned in group 1 who were treated using the cognitive restructuring and also thirty (30) respondents were assigned in group 2 who were treated using the cognitive defusion.

The researcher adopted the procedure of the conduct of the study from the book of Michael A. Britt, Ph. D. entitled *Psych Experiments* [13]. The respondents were grouped into 2; Group 1 used restructuring and Group 2 used defusion. In group A: Restructuring Group: Sat with subjects down one by one and showed them the statements on one side of the page. They were told that these are things that some people sometimes say to themselves. Ask them to pick a number between 1 and 20 and rate the statements as to how uncomfortable that statement would probably make someone feel if they said that to themselves. When they're done have a little talk with them about how irrational the statements are.

After the talk turn the paper over and ask them to rate the sentences again from 1-20. In Group B: Defusion Group: Repeat step 1 from group A. After they have rated the statements on one side of the paper, get the voice changing app, have them record themselves saying each statement one at a time into the app. Then change the recording of their voice into some voice that is funny. Have subjects listen to the recording a couple times. Do this same procedure with the other statements. Then turn the paper over and ask them to rate the statements again from 1-20. And lastly, conduct statistical analysis of data. The statistical tools used were Mean and t-test.

4. RESULTS AND DISCUSSION

This part contains the result of the gathered information presented in graph and tables together with the statistical analyses.

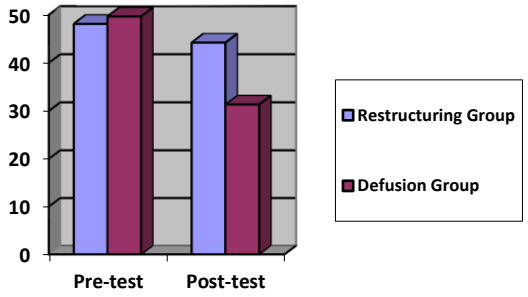

Figure 1: Mean Scores of the Two Groups

Figure 1 shows the mean scores of the respondents. As to restructuring group, in the pre-test, the group gained a mean score of 48.13 and in the post-test, the group gained a mean score of 44.23. The mean difference between the two mean scores is 3.9, since the mean difference is not equal to 0 this shows that there was a change in the behavior of the respondents since they lowered their ratings on the statements. As to the defusion group, in the pre-test, the group gained a mean score of 49.67 and in the post-test, the group gained a mean score of 31.37. The mean difference between the two mean scores is 18.3, since the mean difference is not equal to 0 this also shows that there was a change in the behavior of the respondents since they also lowered their ratings on the statements.

Table 1: Test of Difference between the Mean Scores of the Restructuring Group

Variable	Mean	Difference	t-value	Critical value	Decision	Interpretation
Pre-test Vs Post-test	48.13 44.23	3.9	2.10	1.7	Reject Ho	S

Table 1 shows the t-test result between the mean scores of the pre-test and post-test of the restructuring group. With a t-value of 2.10 which is greater than the critical value of 1.7, thus reject the null hypothesis therefore it is significant. This implies that there is a significant difference between the mean scores of the pre-test and post-test of the respondents who were treated with cognitive restructuring. This means that the change in the behavior of the respondents was due to the cognitive restructuring of the negative thoughts of the respondents. In the treatment given which was cognitive restructuring, the negatively distorted thoughts were modified and lessen.

The result may be similar to the study entitled *Effectiveness of Cognitive Restructuring and Proper Study Skills in the Reduction of Test Anxiety Symptoms among Students in Khalkhal, Iran*, the purpose of this study was to evaluate the efficacy of cognitive restructuring therapy and the appropriate methods of study in reducing test anxiety symptoms among third grade high school students in Khalkhal, Iran [14]. The research method was quasi-experimental with pretest, posttest and control group. The population of the study was all students in the third grade of high school in Khalkhal city. The participants included 300 sampled through Spielberger test anxiety questionnaire and clinical interview.

After determining the prevalence, 30 people who had high anxiety scores were randomly classified into two 15-subject groups in experimental group and control group. Then, data were analyzed by SPSS at two levels (descriptive and inferential). The results showed that the prevalence of test anxiety among students was 36.6%. Results of the standard Hotelling test showed that the impact of cognitive restructuring method and study methods were significant in reducing the symptoms of test anxiety of students. Moreover, the Helmert bound contrast statistics reported that the effect of cognitive restructuring therapy in reducing the symptoms of test anxiety in students is more effective than the appropriate methods.

Table 2: Test of Difference between the Mean Scores of the Defusion Group

Variable	Mean	Difference	t-value	Critical value	Decision	Interpretation
Pre-test Vs Post-test	49.67 31.37	18.3	10.66	1.7	Reject Ho	S

Table 2 shows the t-test result between the mean scores of the pre-test and post-test of the defusion group. With a t-value of 10.66 which is greater than the critical value of 1.7, thus reject the null hypothesis therefore it is significant. This implies that there is a significant difference between the mean scores of the pre-test and post-test of the respondents who were treated with cognitive defusion. This means that the change in the behavior of the respondents was due to the cognitive defusion of the negative thoughts of the respondents. It can be implied that defusion technique has reduced the functions of thoughts by altering the context.

Recording the voice of the respondents saying the statements with negative thoughts then changing their voice into some voice that is funny and repeated for several times has reduced the respondents' discomfort. Cognitive defusion diverts attention away from the *content* or meaning of words and sentences toward the *process* of forming words and stringing them into sentences by concentrating on their sound, pattern, rhythm, frequency, and individual letters or words. Defusion temporarily disrupts the usual meaning of thoughts or spoken/written words even though their form or content may stay the same [15].

Same result may be seen from the study entitled *A Parametric Study of Defusion and the Believability and Discomfort of Negative Self-Relevant Thoughts*, a previous time-series study showed that rapidly repeating a single-word version of a negative self-referential thought reduced the discomfort and the believability associated with that thought [16]. The present parametric study examined whether durations of word repetition were differentially effective in altering the discomfort and believability of negative self-referential thought. In two studies, both discomfort and believability varied systematically with the duration of word repetition. The effects of rapid repetition on emotional discomfort bottomed out after 3 s to 10 s of rapid repetition, whereas the effects on believability did so after 20 s to 30 s of repetition. This study lends support to the cognitive defusion interpretation of the effect of word repetition, suggesting that emotional discomfort and believability may be distinctive functional aspects of cognitive events.

Table 3: Test of Difference between the Mean Scores of Pre-test of the Two Groups

Variable	Mean	Difference	t-value	Critical value	Decision	Interpretation
Restructuring Vs Defusion	48.13 49.67	1.54	0.44	1.7	Accept Ho	NS

Table 3 shows the t-test result between the mean scores of the pre-test of the two groups. With a t-value of 0.46 which is less than the critical value of 1.7, thus accept the null hypothesis therefore it is not significant. This implies that the respondents on both groups have the same level of discomfort in the statements presented to them.

Table 4: Test of Difference between the Mean Scores of Post-test of the Two Groups

Variable	Mean	Difference	t-value	Critical value	Decision	Interpretation
Restructuring Vs Defusion	44.23 31.37	12.86	5.26	1.7	Reject Ho	S

Table 4 shows the t-test result between the mean scores of the post-test of the two groups. With a t-value of 5.26 which is greater than the critical value of 1.7, thus reject the null hypothesis therefore it is significant. Since the mean score of the defusion group is lower than the mean score of the restructuring group this only shows that the treatment using the cognitive defusion was more effective than the treatment using the cognitive restructuring in reducing the discomfort of the respondents on the negative thoughts. Defusion involves teaching individuals to view their thoughts as thoughts rather than considering them as having literal meaning [17]. Therefore, while restructuring aims to challenge negative thoughts and find evidence against them, defusion does not attempt to control or change unwanted thoughts in form or frequency [18]. Instead, it trains individuals to change their relationship to their thoughts, to view them without the need to dispute or challenge them to change overt behavior.

The result of the study may be similar to the study entitled *Using Brief Cognitive Restructuring and Cognitive Defusion Techniques to Cope With Negative Thoughts*, negative thoughts, experienced by 80% to 99% of the non-clinical population, have been linked to the development of psychopathology [19]. The current study aimed to compare a cognitive restructuring and cognitive defusion technique for coping with a personally relevant negative thought. Over a 5-day period, participants used either a restructuring, defusion, or control strategy to manage a negative thought. Pre- and post-intervention participants reported (a) believability of the thought, (b) discomfort associated with the thought, (c) negativity associated with the thought, and (d) willingness to experience the thought. Daily online questionnaires assessing the total frequency of negative thought intrusions and their level of willingness to experience the negative thought were also used [20]. Also, 10 positive and negative self-statements were rated on the same scales, and self-report measures of mood and psychological flexibility were completed. Findings indicated that defusion lowered believability, increased comfort and willingness to have the target thought, and increased positive affect significantly more than the control and cognitive restructuring. Within groups, cognitive restructuring also made significant gains in target thought discomfort, negativity, and "willingness to have" in the same direction as defusion but the no-instruction control did not [21,22]. Negative thought frequency was reduced in the defusion group, maintained in the restructuring group, and increased in the no-instruction control group. Similar trends emerged from the secondary outcome measures, that is, the effects of the strategies on the positive and negative self-statements. The current findings support the efficacy of using defusion as a strategy for managing negative thoughts.

5. CONCLUSIONS

Since the group that was treated with cognitive diffusion technique had shown a greater reduction of discomfort thus it can be concluded that this technique is more effective to use in coping with negative thoughts and may be used to reduce discomfort due to the negative thoughts.

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