

Effectiveness of Cognitive-Behavioral Group Therapy on Academic Worry Among Undergraduate College Students

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ABSTRACT

Higher education has various stressors. Students who lack stress management skills can become very vulnerable to mental health issues, particularly academic anxiety. Academic worry, the cognitive process that generates negative possibilities that may occur in academic life, is an essential feature of academic anxiety with detrimental outcomes over time. Students tend to apply maladaptive coping strategies to academic worry, such as engaging in the worrying process or avoidance behavior, which causes them to become more entangled in their worries. Eventually, those maladaptive coping strategies lead to severe academic performance and an extended study period. Because worry is a cognitive process, a suitable approach to address this issue must also be based on a cognitive-behavior strategy. Cognitive-Behavioral Therapy (CBT) was applied in a group setting because group dynamics help students become more aware and find insights regarding their situations. Four sessions of cognitive-behavioral group therapy were provided to four undergraduate college students. After the intervention, the participants' worry levels decreased, and their beliefs about worry changed. Students' beliefs about worry changed from maladaptive ("worry is dangerous," "helpful," and "uncontrollable") to more adaptive. These findings demonstrate that CBT for worry was effective and advantageous in a group setting given its group dynamics and efficiency.

Keywords: *academic worry, cognitive-behavioral therapy, group therapy.*

1. INTRODUCTION

Higher education has various stressors that can create tough challenges for students. Studies from Uni Health in England on students' mental health show that 80% of students report that their anxiety symptoms are related to their academic life (Lawton, 2019). Furthermore, an unpublished survey conducted by our research team in 2018 regarding problems faced by undergraduate students at the Universitas Indonesia (UI) indicated that 55% of the respondents experienced issues related to

anxiety in their academic life. Anxiety symptoms that are experienced by students and are related to their academic life are known as academic anxiety (Das, Halder, & Mishra, 2014). Although anxiety is a normal response to difficult situations in life, academic anxiety can have a very detrimental effect because it is significantly correlated with severe academic performance (Hooda & Saini, 2017). Academic anxiety is also strongly associated with poor concentration and psychological distress (Duraku & Hoxha,

2018). Moreover, if the anxiety remains untreated, it can lead to a diagnosis of generalized anxiety disorder (GAD) (Wolitzky-Taylor & Telch, 2010).

The essential feature that causes anxiety to persist over time is worry (Dar, Iqbal, & Mushtaq, 2017). Ginsberg (2006) emphasizes that the emergence of academic anxiety in students is strongly influenced by their level of academic worry. Academic worry includes concerns about the aspects of daily living that may affect their academic life, particularly in terms of performance and ability to meet the academic demands of others (peers, parents, and lecturers) and the presence of unrealistic objectives in academic life (Ginsberg, 2006). Since academic worry is one of the main causes of academic anxiety, academic worry must be targeted to properly manage students' academic anxiety.

The difference between worry and anxiety is the domain of function that affects the individual. Worry affects the cognitive domain and is manifested as negative thoughts about bad possibilities that may occur in the future (Saulsman, Nathan, Lim, Correia, Anderson, & Campbell, 2015). Meanwhile, anxiety is the result of cognitive aspects that are influenced by worry. Anxiety includes both cognitive aspects and affective and behavior domains. Worry causes anxiety through the following mechanism: as a cognitive process, worry influences the affective domain that brings out the feeling of "feared helplessness" and the behavioral domain that elicits unproductive repetitive behavior to face worse things in the future (Binns, Egger, & Reznik, 2017).

According to Davey and Meeten (2016), it is important that individuals develop adaptive skills to manage their worry. One of the first steps is becoming aware of their worries. When students are less aware of academic worry, they tend to implement fewer adaptive coping strategies by becoming dissolved in their worrying thoughts or by trying to avoid what they feel by engaging in many activities outside of academics, skipping class, or taking a leave. These coping strategies have a negative impact on academic performance such that students will become increasingly ensnared in the worry cycle.

Given that worry is a cognitive process, a suitable intervention to address this issue must be based on cognitive-behavioral strategies. Studies show that cognitive-behavioral strategies have been proven to be consistently effective in managing anxiety symptoms and in lowering worry levels (DiMauro, Domingues, Fernandez, & Tolin, 2013; Wootton, Bragdon, Steinman, & Tolin, 2015; Cuijpers, Gentili, Banos, Garcia-Campayo, Botella, & Cristea, 2016). There are several evidence-based psychotherapies to treat excessive worry that utilize a cognitive-behavioral strategy, such as Cognitive-Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and Acceptance-Based Behavior Therapy (Juncos & Markman, 2015; Brown, Forman, Herbert, Hoffman, Yuen, & Goetter, 2011). However, among those three psychotherapies, CBT and ACT have been shown to be less influenced by therapist biases (Lappalainen, Lehtonen, Skarp, Ojanen, & Hayes, 2007). Even a trainee therapist with six to twelve hours of training can

effectively implement CBT or ACT to the general outpatient population, such as college students (Lappalainen, et al., 2007). In this study, the researcher chose CBT rather than ACT because CBT has been proven to be more impactful in addressing situations that induce worry, such as academic situations, through the behavioral and cognitive dimension. According to Borza (2017), the behavioral dimension of CBT helps clients become exposed to their own emotions and thus they learn how to fight the maintaining factors and avoidance behaviors that perpetuate excessive worries. Moreover, the cognitive dimension of CBT gives clients a set of skills that can help them step back from their automatic thoughts, separate themselves from their worries, and modify the contents of their thoughts to reach a more objective evaluation of the situation (Borza, 2017). Based on those benefits outlined above, CBT was chosen as the primary regiment for treating academic worry in this study.

CBT is a type of psychotherapy that helps individuals manage their problems and change maladaptive responses by focusing on changing aspects of cognition and behavior (Butler, Fennell, & Hackmann, 2008; O'Kelly, 2010). Several activities are performed during CBT, including psychoeducation, the antecedent – belief – consequence model (A-B-C model), cognitive restructuring, exposure, and relapse prevention (Norton, 2012). At the beginning of the CBT process, the therapist provides psychoeducation about anxiety and worry as the core component of anxiety. In the next step, the therapist and patient collaborate to create case formulations about worry that are perceived by the patient using the A-B-C

model. After that, the patient begins to learn about cognitive and behavioral skills to manage worry, such as cognitive restructuring, relaxation, or exposure. Cognitive restructuring aims to change the patient's beliefs about worry. This restructuring can be performed through collecting evidence that corroborates or weakens the patient's beliefs about worry. One technique that is usually employed consists of finding evidence for versus evidence against the beliefs. Another technique involves behavioral experiments to determine the truth of patient's beliefs by trying them out or experimenting with those beliefs in real life (Westbrook, Kennerley, & Kirk, 2011; Saulsman et al., 2015). After learning these cognitive and behavioral techniques, the patient can develop a prevention strategy known as relapse prevention in case the patient experiences a similar problem in the future.

CBT can be applied in both individual and group settings. According to Wolgensinger (2015), CBT in individual and group settings is beneficial for individuals who experience symptoms of worry and anxiety. CBT in group settings or cognitive-behavioral group therapy is more effective, efficient, and full of social support for individuals, which emerges through awareness and insights provided by the group dynamics (Anderson & Rees, 2007). However, individuals may feel uncomfortable sharing their feelings with a group of people during a group session, which is a barrier of cognitive-behavioral group therapy. Additionally, since CBT requires a regular meet-up schedule, when the therapy is conducted in a group setting, it is quite difficult to accommodate the interests of each group member. This may

lead to a higher drop-out rate (Whitfield, 2010). However, those barriers in implementing cognitive-behavioral group therapy can be overcome by designing an implementation procedure that allows each participant to contribute and make decisions about the rules and technical considerations of the group therapy implementation. For example, participants can be asked about their preferred schedule, duration, or rules to be obeyed during the session. These decisions are then solidified by creating a written group

2. METHODS

2.1. Participants

The target population of this study was undergraduate students in Universitas Indonesia (UI). UI students were chosen because UI is one of the state universities in Indonesia known for its competitive academic environment. Furthermore, UI was the most accessible state university for the researcher. In 2018, we conducted a pilot study surveying UI student about their mental health problems. In this survey, the researchers found that most respondents (55%) face academic anxiety. Furthermore, most respondents reported frequent rumination about their academic problems, namely academic worry, which then caused them to feel negatively about their academic

agreement at the beginning of the therapy sessions.

In summary, this study will answer the following research questions:

1. Can cognitive-behavioral group therapy decrease the level of worry perceived by students?
2. Can cognitive-behavioral group therapy help students cope with academic worry?

life and compromised their academic performance.

The next step involved conducting an intervention study to treat problems related to the academic worries of UI students that were identified in the survey. The sample in this intervention study was selected using a purposive sampling method with the following inclusion criteria: (1) UI undergraduate students; (2) moderate level of academic worry based on measurements from the Student Worry Questionnaire (SWQ) with a total score greater than or equal to 40; and (3) agreed to participate in group therapy by providing informed consent. The participant screening process is shown in Figure 1.

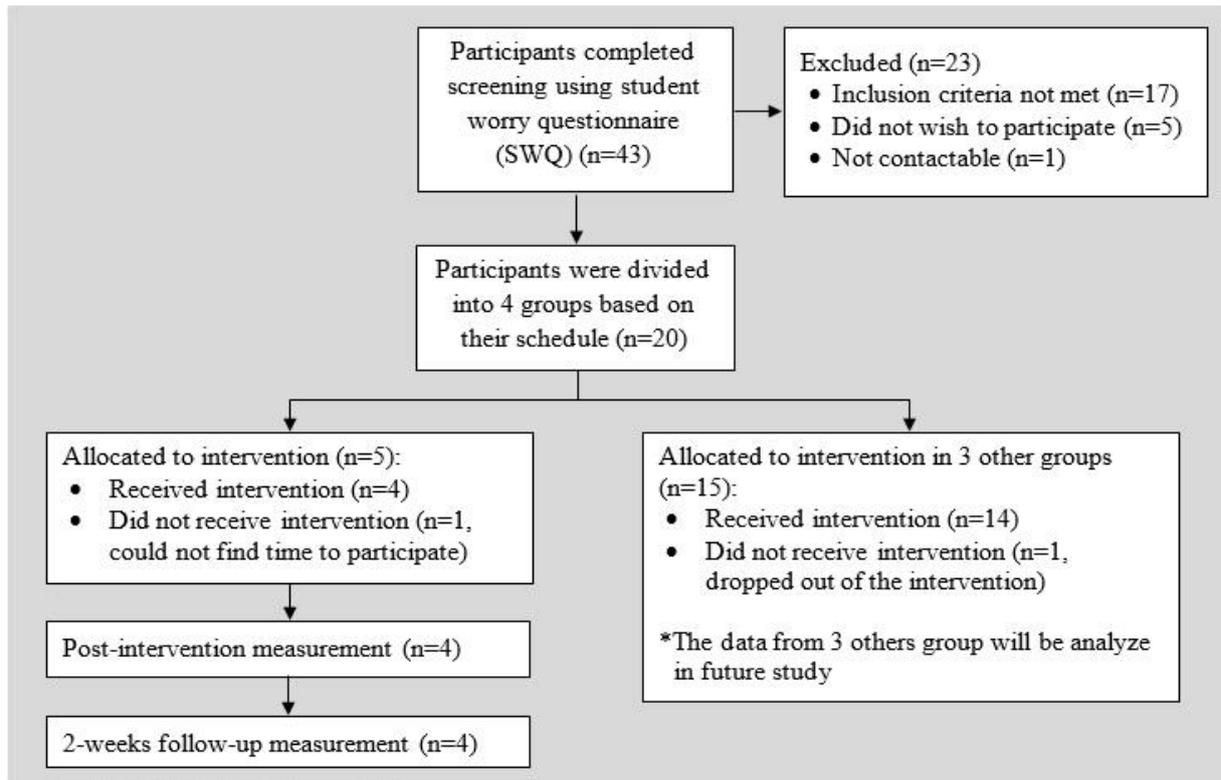


Fig. 1. Participants Screening Process

2.2. Research Design

This study utilized a one-group pre-test–post-test quasi-experimental design. In this study, the dependent variable, academic worry, was measured before (pre-test) and after (post-test) the treatment or intervention (Privitera, 2019). Moreover, academic worry

was measured two weeks after the completion of the intervention as a follow-up measurement. The academic worry level was measured by the SWQ. Figure 2 displays a summary of the research design.

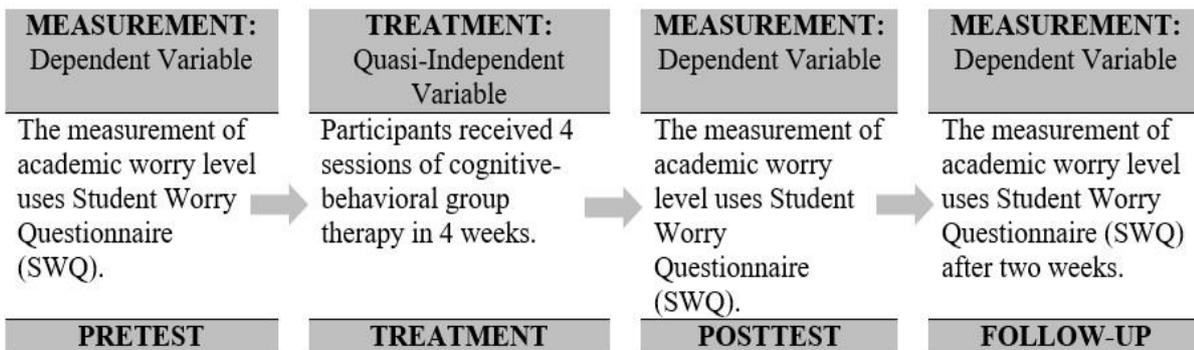


Fig. 2. One-group pretest-posttest quasi experimental design

2.3. Measures

The students’ academic worry level was measured by the SWQ, which was developed by Osman, Gutierrez, Down,

Kopper, Barrios, and Haraburda (2001). SWQ measurements were conducted three times: pre-test, post-test, and follow-up. The SWQ is a self-reported questionnaire

containing 30 statements related to various situations and reactions to worry in academic life. The statements are categorized into the following six domains: worrisome thinking, academic concerns, significant others' well-being, social adequacy concerns, financial-related concerns, and general anxiety symptoms. The participants were asked to indicate their answer on five-point Likert scales, with scores of 0 to 4 indicating almost never, rarely, sometimes, often, and almost always, respectively. The total score was generated by summing the scores of each item. The total score represents the participant's worry level. The researcher decided to categorize the total SWQ score into three levels of worry: low (<40), moderate (40–79), and high (>80). Qualitative data were also obtained from observations, interviews, group discussions, and students' worksheets during the session.

2.4. Ethics

The participants provided their approval for group therapy by reading the informed consent form and discussing it with the therapists. After the participants understood the agreement points covered in the informed consent, they signed the informed consent form before beginning the therapy.

2.5. Procedure

The cognitive-behavior group therapy intervention was conducted once a week over a four-week period. The sessions were conducted according to the CBT for worry module, "What? Me Worry!?! Mastering Your Worries" developed by Saulsman and his colleagues (2015). The intervention consists of four main components: (1) identifying beliefs and negative-automatic thoughts (NATs) related to worry; (2) cognitive techniques for cognitive restructuring; (3) behavioral techniques for cognitive restructuring; and (4) improving psychological well-being when dealing with worry. The outline of the intervention is shown in Table 1.

Table 1. Cognitive-Behavioral Group Therapy Outline

Session	Main Objectives	Brief Description
Session 1	Identifying beliefs and negative-automatic thoughts (NATs)	Introduction, group agreement about group therapy procedure, catharsis session, psychoeducation (academic anxiety and academic worry), A-B-C model, and goal setting
Session 2	Identifying beliefs and NATs and cognitive restructuring through cognitive techniques	Discuss NATs and beliefs about worry, cognitive technique to overcome worry: "Evidence for versus evidence against"
Session 3	Cognitive restructuring through behavior techniques	Behavior techniques to overcome worry: "Worry postponement" and "Accepting uncertainty with a mantra"
Session 4	Increase psychological well-being when facing worry	Identifying participants' resources to increase their psychological well-being when facing worry, relapse prevention, and termination

2.6. Data Analysis

A Wilcoxon signed-rank test was used to investigate the total SWQ scores and determine whether the score changes from pre-test to post-test and follow-up were significant. The Wilcoxon signed-rank test is an alternative to the repeated-measures test, which is used in a pre-test–post-test design with a small sample (Gravetter & Wallnau, 2016). Additionally, qualitative

data were analyzed using qualitative content analysis methods. Qualitative content analysis is a descriptive research method in which qualitative data are categorized based on specific coding frames that correspond to research questions/referral questions (Schreier, 2012).

3. RESULTS

The study participants included four undergraduate students from UI who had moderate levels of academic worry (SWQ

score > 40). A description of the participants is shown in Table 2.

Table 2. Participants’ Description

Participants*	Sex	Age	Baseline SWQ Score (Worry Level)	Presenting Problems
Mark	Male	18 y.o.	63 (Moderate)	Mark reports worrisome thoughts about completing his campus assignments. As a college sophomore, he strives for academic perfection, and if there are assignments from subjects that are not in his area of interest, he tends to distract himself from completing the assignment. All these distractions just make Mark more worried than before, and he describes his mind as losing control and feeling like it’s going to explode.
Jason	Male	23 y.o.	50 (Moderate)	Jason reports his concerns and worries about completing his final project (thesis) because the topic is complex. He also feels worried when meeting his supervisor, and his worrisome thoughts became worse when he learned about his final project examiner, who he describes as hard on students. All those worries cause Jason to resist completing his final project and create a worrying loop that he believes induced some of his physical problems (e.g., body itching and sleep problems).
Nofellina	Female	20 y.o.	71 (Moderate)	Nofellina reports worrying about her GPA and about a lecturer that she describes as hard on students. Those worrisome thoughts cause Nofellina to push herself to study until late every

				night, even though her body feels really tired and she cannot remember most of the material. Despite feeling some negative effects of worry, Nofelina still convinces herself that if she wants to achieve her dream (receiving a scholarship to study abroad), she must push herself constantly, which her worrisome thoughts tell her to do.
Nellie	Female	20 y.o.	60 (Moderate)	Nellie reports worrying about her GPA and about her poor performance in speaking a foreign language in some college courses. Because of her worries, she tends to engage in other activities outside class/campus and skips classes. However, those behaviors just make her more worried than before because she feels left behind by her classmates, who are becoming better at speaking a foreign language than she is.

*Each participant is assigned a pseudonym

Four major problems associated with academic worry could be identified from the qualitative data: (1) worry about completing their assignments and final project (thesis); (2) worry about their grade point average (GPA); (3) worry about their grades in subjects they considered not their best; and (4) worry about their lecturers. These worries triggered the participants' avoidance behaviors, such as trying to distract themselves by participating in many non-academic activities, skipping classes, avoiding campus assignments, and procrastinating until near the deadlines. After undergoing cognitive-behavioral

group therapy, all participants experienced cognitive changes. Those changes manifested in changes of beliefs related to worry. The participants' old maladaptive beliefs ("Worry is dangerous", "Worry is helpful", and "Worry is uncontrollable,") were transformed into more realistic and balanced beliefs. These changes in belief are described in Table 3. Qualitative data from the group therapy session also showed that the participants gained some insights during the sessions such as becoming more aware about the importance of self-care, social support, and personal sources to cope with worry (Table 4).

Table 3. Changes in Participant Beliefs

Participants	Past Beliefs	New (Alternative) Beliefs
Mark	Worry is uncontrollable: “When I felt worry about my assignments, I felt as if the walls of my room were narrowing and slowly going to crush me. At that moment, I could not control my mind at all. The more I tried to hold it, the more I believed that at one point my mind would explode.”	Worry can be manageable: “I realized until now, I had never really tried to manage my worries, I just avoided or resisted my worry. When I tried the worry postponement technique, I felt that I could focus on what I was doing. Moreover, when worry crossed in my mind, I knew that I could postpone it without overthink too much because I had scheduled my worry time. Now that I know the right technique, I begin to

		manage my worries well.”
Jason	Worry is dangerous: “I feel that worry is something that can be dangerous. It causes physical disorders such as body itching and digestive disorders.”	My problem is not solely due to worry: “I am aware that my physical problems were not solely due to my worry. It can be from my lifestyle which include: Eating patterns and irregular sleep schedule. Those things turns out contribute to physical disruption. So it is important to maintain my self-care.”
Nofellina	Worry is helpful: “Worrisome thought helps me being more discipline in my study. When I’m worry, I will force myself to study until late night, even though my body already tired.”	Worry is not so helpful: “When was not worried, I realized that I was more focused. I did not need to think about the things that might happen in the lecture next day. So I believe that worry not necessarily helps me in learning. The thing that helps me the most is practicing the worry postponement technique, because I become more focused with what I am doing.”
Nellie	Worry is uncontrollable: “I try to control my worrisome thoughts by suppressing them or making myself busy with other things. However, it keeps coming into my mind.”	Worry can be manageable: “Worry can be controlled with the right techniques. Besides controlling the worry, we also need to do other things that make us happy in order to get a balanced life and increase psychological well-being.”

Table 4. Participant Insights

Participants	Insights
Mark	Acceptance “Using worry postponement technique makes me realized that everything has its season, including my worrisome thoughts, it comes and goes.” The importance of self-care “I realized that doing leisure activity can at least makes me happy, even though my worry still come and go.” Perceived social support “Hearing others with similar problem as mine, make me realized that I am not the only one who face that kind of problem.”
Jason	The importance of self-care “I realized that self-care is really important, even doing my hobby or giving myself

	leisure time is crucial to maintain well-being in the middle of my problems.” Perceived social support “This group therapy means that no one is being stranded alone in an island and we need to open ourselves.”
Nofellina	The importance of self-care “I almost forget about doing any leisure activity and turn out it’s really important to maintain my spirit when worrisome thoughts come into my mind.” Perceived social support “Knowing others who have similar problem as mine make me feel not alone.”
Nellie	The importance of self-care “Giving myself time to rest or doing self-care is important to help me face my problem.” Perceived social support and self-help “Through group therapy, I realized that after hearing other people with similar problem as mine, it is easier for me to give some helpful advice to other participants. Those advices actually are also applied to my case, however it is really difficult when I try to give my own self.”

In addition to cognitive changes and gleaning insights, the quantitative data also indicated a decrease in the participants’ worry levels from pre-test to post-test and to follow-up, as measured by the SWQ (Table 5 and Figure 3). The pre-test to post-test measurements indicated that although most of the participants still had moderate levels

of worry, their scores had decreased. Furthermore, one of the participants (Jason) displayed a decrease in his worry level from moderate to low in the post-test session. At the follow-up measurement, all participants reported a low level of worry.

Table 5. Changes in Participants’ Worry Level

Participants	Pre-test		Post-test		Follow-up	
	SWQ Score	Worry Level	SWQ Score	Worry Level	SWQ Score	Worry Level
Mark	63	Moderate	44	Moderate	34	Low
Jason	50	Moderate	38	Low	29	Low
Nofellina	71	Moderate	57	Moderate	36	Low
Nellie	60	Moderate	46	Moderate	33	Low

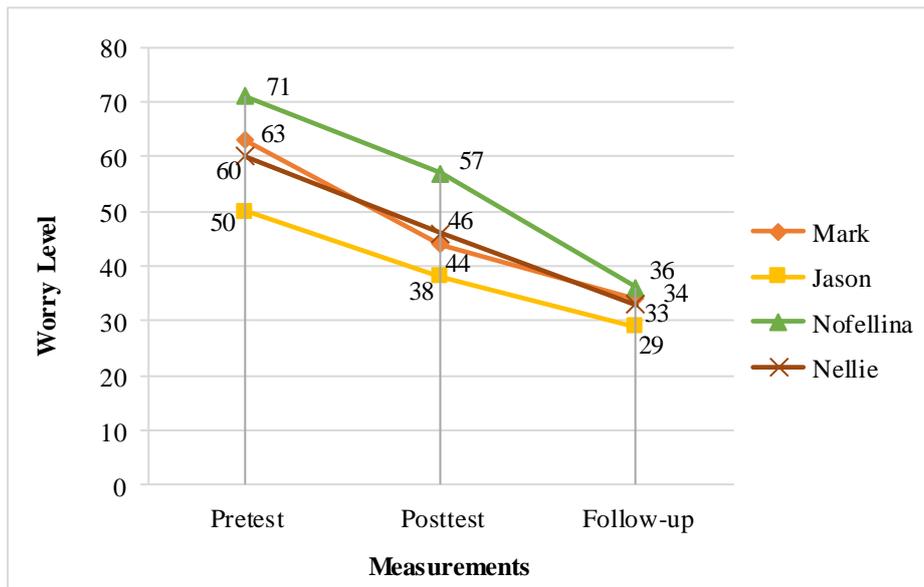


Figure 3. Changes in participants' worry level.

The statistical test results indicated that the decrease in the participants' worry level was not significant (pre-test to post-test: $p > 0.05$, $p = 0066$, $r = 0.65$; post-test to follow-up: $p > 0.05$, $p = 0068$, $r = 0.65$; pre-test to follow-up: $p > 0.05$, $p = 0068$, r

$= 0.65$). However, the effect size (r) of the intervention can be categorized as large (Table 6). These data indicate that there is a strong correlation between cognitive-behavioral group therapy and a decrease in participants' worry level.

Table 6. The Significance of Worry Level Changes

Total Score SWQ	Z-score	p-value	Effect size (r) ^a
Pre-test–Post-test	-1.841	0.066	0.65
Pre-test–Follow-up	-1.826	0.068	0.65
Post-test–Follow-up	-1.826	0.068	0.65

a. Effect size (r) of the intervention is categorized as large ($r > 0.5$)

4. DISCUSSION and CONCLUSION

Our results showed that the cognitive-behavioral group therapy approach helped decrease the participants' worry level. Moreover, the effect lasted for up to two weeks after termination of the therapy. After being followed-up, the participants' worry levels decreased from moderate to low. However, the statistical analysis showed that the change was not significant.

The decrease in worry level was not significant for several reasons. The first reason might be related to other personal issues that the participants have besides academic worry. These personal issues might be related to their personal core beliefs, which cannot be targeted in the therapy session. This possibility is supported by the explanation from Millings and Carnelley (2015), who state that individuals' core beliefs about

themselves and the world contribute significantly to the emergence of maladaptive beliefs about worry and excessive worrisome thoughts. Koerner, Tallon, and Kusec (2015) also mention the importance of addressing an individual's dysfunctional core beliefs during CBT sessions because core beliefs are a stable aspect during an individual's life span, and they are highly correlated with exaggerated worry and GAD symptoms. Thus, further studies should both focus on participants' maladaptive beliefs about worry and on how to identify and restructure an individual's core beliefs about themselves and the world by adding the "down-arrow" technique in the intervention module.

Another possible reason for the lack of significance may be related to unwanted events or side effects induced by CBT. According to Schermuly-Haupt, Linden, and Rush (2018), patients with excessive worrisome thoughts or anxiety disorders may feel uncomfortable or distressed when participating in CBT and being encouraged to talk about detailed aspects of certain events and their emotions and thoughts. In effect, this might hinder the participants from opening up about their problems and hence prevent their progress in therapy. In our study, one participant (Mark) felt uncomfortable sharing his worrisome experiences with the other members during the first session of group therapy. However, between sessions one and two of group therapy, he requested to talk personally with the therapist. During this individual session with the therapist, Mark described his worrisome thoughts as driving him "like crazy" because while worrying, he perceived that the room was narrowing and the wall would crush him.

Those thoughts and feelings made Mark want to avoid any stimuli related to his academic worry, and he did not want to talk about it in the first group session. The therapist encouraged Mark to face his worrisome thoughts and discussed it using a "bottle of soda metaphor". The therapist said that if he keeps suppressing his thoughts and feelings, they would accumulate just like a bottle of soda that had been shaken and not yet opened. The pressure would become so strong that eventually it would explode because the tension has not been released. Mark was able to relate his experiences with the "soda bottle metaphor" and said that he would try to be more open about his experiences during group sessions.

We hypothesized that the distress and uncomfortable feelings experienced by Mark might also be felt by other participants in group therapy; hence, it may prevent them from talking about their real feelings. Their bottled-up feelings might negatively impact the outcomes of cognitive-behavioral group therapy. Further research should include strategies that encourage participants to face their distress and reduce the uncomfortable feelings that result from opening up about their problems and emotions. To help the researcher identify side effects and adverse treatment reactions from participants, further research should administer the Unwanted Events-Adverse Treatments Reactions Checklist (UE-ATR Checklist) developed by Linden (2013). In this way, side effects and adverse treatment reactions can be minimized.

Although the study results were not significant, we found that the decreased worry level was strongly correlated with cognitive-behavioral group therapy, as

indicated by the effect size (r) of the correlation. During our study, we found that two sessions in particular, sessions three and four, were perceived by the participants as the most helpful. During session three, the participants were introduced to cognitive restructuring via behavior techniques: the “worry postponement” technique and “accepting uncertainty with mantra”. During worry postponement, all participants learned to pause or postpone their worrisome thoughts and would only think about them at a specific scheduled time during the day. If worry entered their minds outside the scheduled worry time, the participants were told to write down those worrisome thoughts and continue with their current activities. They were only allowed to think about their worries during the scheduled worry time. By participating in these activities as a behavioral experiment for one week, the participants learned to control their worries and gained insight about how to manage worry. In session three, the participants also learn to accept their worrisome thoughts using a mantra. The participants created some interesting mantras that worked to help them overcome worry, including “Everything has a season, including my worrisome thoughts, it comes and goes”, “Life is dukkha (suffering), so why bother with worry”, “Focus and do your best for today, don’t bother about tomorrow”, and “There is no should, but all the things can and could be pursue”. Meanwhile, during session four, the participants gleaned insights about the importance of self-care for maintaining their psychological well-being even though worrisome thoughts still come and go. The participants gleaned those insights after they learned how to

identify their resources to overcome worry.

This study has several strengths. First, according to the intervention implementation evaluation, all participants felt that the group dynamics present during group therapy helped them reduce their worry level. They felt that the group therapy helped them better understand their academic worries and anxieties, which in turn enabled the participants to better understand themselves. Second, all participants were able to learn from others’ experiences. These two benefits agree with findings by Anderson and Rees (2007), who stated that the benefit of group therapy lies in the social support provided by the group dynamics, so it facilitates the ability of the participants to gain awareness and insights about the situation through experiences that are shared by the other group members.

Third, using the materials provided during the cognitive-behavioral group therapy, such as cognitive and behavioral techniques for cognitive restructuring, all participants felt that the techniques they learned succeeded in changing their maladaptive beliefs into adaptive beliefs. For example, in our study, some of the participants’ new beliefs were as follows: “Worry can be manageable”, “My problem is not solely due to worry”, and “Worry is not so helpful”. The participants’ changing beliefs gave them the insight that although the worries were still present in their mind, they could focus on current moments and not be so easily distracted.

Fourth, we allowed enough opportunity for the participants to open up about their problems and improve their engagement with one another during the

catharsis session. This helped the participants improve and learn the material better as they released their negative emotions. Fifth, providing material to identify the sources that can improve the psychological well-being of participants was very helpful. This allowed the participants to focus on self-care and perform activities that could improve their psychological well-being instead of focusing on their worries. This finding was also supported by the study of Swift, Cyhlarova, Goldie, and O'Sullivan (2014), who stated that performing activities that are preferred by individuals can increase life satisfaction and psychological well-being, which contributes to reducing anxiety symptoms perceived by individuals, including worry.

In conclusion, our study found that a cognitive-behavioral group therapy intervention can help participants address their academic worries. All participants were able to gain insights about the importance of changing maladaptive beliefs regarding worry, such as "Worry is dangerous", "Worry is helpful", and

"Worry is uncontrollable", into more adaptive beliefs such as "Worry can be manageable", "My problem is not solely due to worry", and "Worry is not so helpful". This research also showed that changes in beliefs can help participants decrease their worry level, which is rarely discussed in other studies regarding the effectiveness of CBT. Furthermore, this research shows that a CBT intervention conducted in group settings was effective and advantageous due to its group dynamics and efficiency in helping individuals who experience similar issues.

This article only discusses the results of our preliminary study; three other intervention groups with a similar approach and similar sample groups were also created. Further analysis from those intervention groups has not yet been performed. In the future, we aim to conduct more analyses to determine the effectiveness of cognitive-behavioral group therapy on academic worry among undergraduate college students with larger samples.

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