

## Phototherapy to increase self-compassion in college students

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### Abstract

*Purpose:* This study aims to determine the effect of phototherapy on increasing self-compassion in college students.

*Method:* This research method uses a quantitative experimental approach. This research was conducted using a quasi-experimental design. The sampling technique used in this study was non-probability sampling. The criteria for this study are University X students, aged 17–24 years, who have low self-compassion. The subjects of this study were 64 students at University X, divided into two groups: control and experimental.

*Results:* (1) There is an effect of phototherapy on increasing self-compassion in students who are in the experimental group who have attended training, namely most of the subjects experience an increase in self-compassion. (2) There is a difference in self-compassion between the experimental group that was given phototherapy treatment and the group that was not given phototherapy treatment.

*Conclusion:* It can be concluded that *phototherapy* training can make a difference in *self-compassion* in students, has an impact, and is proven effective for increasing *self-compassion* and increasing self-understanding.

**Keywords:** college students; lectures; phototherapy; self-compassion

### INTRODUCTION

During the current lecture period, many students experience development marked by psychosocial, cognitive, and biological development. Today, students are required to be able to establish good relationships with their environment well to be more mature, able to control emotions, and be able to apply good ethical values to their environment (Kawitri et al., 2020). According to Roki Saputra, J et al., (2022) based on this, students can control emotions and can adapt to new environments and develop in their environment, especially in campus environments that are considered harsh by most students which are considered to damage mental health which affects current development and progress.

Many students encourage themselves to continue to grow with their goal of achieving a good future and realizing their desires, students often push themselves to achieve something they want without taking into account or looking at their health, not a few students experience fatigue or illness because they focus on what they pursue. Quoted from WHO (2020) in 2020 said that 1 billion people in the world live with mental disorders, in commemoration of Mental Health Day which is commemorated every year which falls on October 10 released data that 3 million people die every year and in Indonesia itself the prevalence of suffering from mental emotional disorders such as anxiety and depression in adults or early adulthood reaches approximately 1.74 million

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people who suffer from disorders mental emotional (Karinda, F. B., 2020). Lately, most students have various causes of stress, including occurring in the student environment, academic demands, and doing assignments given by lecturers to students. This statement is supported by the findings of other researchers who state that this is because there are significant differences between studying in high school and college so that students who have not been able to adapt to a new environment tend to be stressed (Merry & Mamahit, 2020).

This is directly related to how students can apply self-compassion to themselves as a sense of self-appreciation for all achievements and struggles after going through all these challenges, conveying that Neff (2023) self-compassion can be in the form of tenderness and nurturing, especially for someone to accept themselves and neutralize emotions that are peaking. However, self-compassion can also be said to be a form of motivating change, self-protection, and meeting our needs. According to stating that Kotera et al. (2021) self-compassion is now increasingly considered, because it is related to the mental well-being of a student, this should have been applied by students. Students should see how important it is to self-compassion for themselves as a form of loving, respecting themselves for all behaviours, and struggles so that students can accept failures, imperfections, and mistakes by not judging themselves (Marizka et al., 2019). Self-compassion is influenced by several things from culture, gender, and age. These three things are the basis why self-compassion must be considered in the development of students to understand themselves when facing suffering rather than judging themselves or hurting themselves, and can see an event as an experience and learning for themselves (Neff, 2023).

Self-compassion should already be possessed by everyone. A healthier attitude in going through various things including when going through the difficulties and sufferings of life, self-compassion in oneself becomes a form of awareness and sensitivity to the suffering that is being experienced by oneself by responding to it through good understanding without judgment, warmth, calmness, and care (Sugianto et al., 2020). According to Neff et al. (2021) self-compassion in self has various benefits for mental health, this makes self-compassion a positive thing in encouraging self-acceptance of the problems that occur in him. Self-compassion is carried out by showing a positive attitude and self-acceptance in the face of failure, mistakes and suffering (Fatmala & Rinaldi, 2021). Students can develop self-compassion to overcome academic pressure, failure, problems faced, this can help students themselves reduce stress, improve students' mental well-being, and increase their motivation in learning, improving knowledge and achieving dreamed academic goals (Dellafrinida & Yudi, 2022). However, self-compassion needs help to improve it with good therapy, one of which is that students can also do phototherapy if they experience depression, stress, difficulty sleeping, and mood disorders that change every time (Madidir & Muhid, 2021).

According to Testoni et al. (2020) phototherapy becomes one of the new forms of art therapy that can be used both in any therapeutic area as a support intervention aimed at improving well-being by providing facilities for the adjustment of the person to stressful events that have been experienced and relieve his psychological pain. Students are certainly in a depressed state in the midst of the problems they experience, they usually have difficulty controlling their emotions and mood, resulting in stress, depression, and great anger (Merry & Mamahit, 2020). This can cause motivation in students to go down to achieve what they want, not infrequently there are also students who immediately move quickly in handling this by counselling. The purpose of this is to get therapy, there are several therapies that can be done, including phototherapy because this

method is considered effective for relieving depression, lowering emotions, and maintaining mental health (Isti'adah & Nurfarhanah, 2023).

The existence of this phototherapy method is to help increase self-compassion in students themselves so that with this therapy method students can increase self-confidence, increase motivation, maintain mental health, and be able to solve the problems they experience (Madidir & Muhid, 2021). According to Susilo et al. (2021) phototherapy, a system that is intertwined with self-compassion as a photo-based approach method by mental health professionals. This approach can be an alternative as part of therapy in helping to consciously increase self-compassion to help train oneself in acceptance of something and cognitively integrate the insights immersed in photos or images so that they can understand themselves and direct life to a better one. Phototherapy uses an approach that is photo-based, where the photo can interpret words that cannot be conveyed by the person. This technique is also an alternative in the practice section to help cognitively reintegrate insights in photos so that they can understand themselves better in the future (Tourigny & Naydenova, 2020). Based on the explanation of previous researchers stated that Phototherapy uses an approach whose approach is photo-based, where the photo can interpret words that cannot be conveyed by the person. This technique is also an alternative in the practice section to help cognitively reintegrate insights in photos so that they can understand themselves better in the future. According to Testoni et al. (2020) phototherapy is one form of art therapy that is used as a support to improve individual well-being by relieving pain.

The background of the problem above has explained about self-compassion and phototherapy felt by students who are categorized as experiencing depression, stress, and difficulty in controlling emotions. Based on this background, researchers are interested in conducting research entitled "Phototherapy to Increase Self-Compassion in College Students". In this study, the first hypothesis was whether there was an effect between phototherapy on increasing self-compassion in students who were given treatment. Second, is there a difference between the experimental group given phototherapy training and the control group that was not given phototherapy training.

## **METHOD**

The study was conducted using a quasi-experimental design. A quasi-experiment is a type of experiment in which the grouping of experimental units into experimental groups and control groups is not done randomly (non-random assignment). Subjects were put into an experimental group based on the results of a self-compassion scale, then subjected to a pre-test. After that, phototherapy is carried out. After being treated on the subject, a re-measurement (post-test) will be carried out.

The sampling technique in this study uses non-probability sampling, which is a sampling technique by not giving members of the population the same opportunity to be selected as sample members. Determination of research samples using purposive sampling, namely taking sample members by making certain considerations (Sugiyono, 2018). The criteria for this study were University X students, aged 17 – 24 years, and had low self-compassion. The subjects of this study were 64 students of University X, namely 32 students with phototherapy training and 32 students who were not given training. After the treatment is given, it will be measured again using a post-test with the aim of measuring the effectiveness of phototherapy on self-compassion. The use of this design aims to get more accurate results because the results of the pre-test will be compared with the situation after treatment as seen from the post-test results (Sugiyono, 2017).

The data collection method used in this study used Likert type scale research measuring instruments. The research measurement tool used is the self-compassion scale. The validity of measuring instruments is not carried out because the scale is the result of adaptation of the scale made by previous researchers. Data analysis techniques are carried out using reliability tests, normality tests, homogeneity tests, and hypothesis tests.

## RESULT

The description of the characteristics of the research subject provides information related to the description of the subject in this study which is adjusted to the needs and objectives to be observed by the researcher. The subjects in this study were University X students. It is known that the subjects in this study consisted of age categories of 20 years (40.6%), age 21 years (18.8%), age 19 years (18.8%), age 18 years (15.6%) and age 22 years (6.3%). The subjects in this study consisted of students with female (90.6%) and male (9.4%) genders. The subjects in this study showed that the highest number came from the Faculty of Social and Political Sciences (71.9), and the Faculty of Teacher Training and Education and the Faculty of Engineering each 3.1%.

Based on the results of the scores that have been obtained in the experimental group, it is known that there are differences in the results of pre-test and post-test scores in the experimental group after treatment, namely as many as 27 subjects experienced an increase in self-compassion and as many as 5 subjects experienced a decrease in scores on self-compassion. While in the control group it was known that there were differences in the results of pre-test and post-test scores in the control group when not given treatment, namely as many as 6 subjects experienced an increase in self-compassion, as many as 16 subjects experienced a decrease in self-compassion, and as many as 10 subjects experienced stable or fixed scores. An assumption test is first carried out consisting of a normality test and a homogeneity test.

**Table 1**  
*Normality Test Results*

Group	Shapiro-Wilk			Information
	Statistics	Df	Sig.	
Experiment	0.93	32	0.05	Abnormal
Control	0.93	32	0.04	Abnormal

The results of the distribution normality assumption test on the self-compassion variable in the experimental group produced a p value = 0.04 ( $p < 0.05$ ) and in the control group produced a p value = 0.05 ( $p < 0.05$ ). Test results based on rules showed that the distribution of self-compassion variable items in the experimental group and the control group was abnormal.

**Table 2**  
*Cohesiveness Homogeneity Assumption Test*

Levene's Test For Equality Of Variance	
Sig	Information
0.81	Homogeneous

The calculation results show the value of the results in the experimental and control groups  $p = 0.81$  ( $p > 0.05$ ) which means that the data of the self-compassion variable is homogeneous. After the assumption test, researchers conducted a hypothesis test using the Wilcoxon Signed Rank Test and the Mann-Whitney U-Test.

**Table 3**  
*Wilcoxon Pre-Test – Post-test Results Self-Compassion in Experimental and Control Groups*

Group	Z value	Sig	Mean		Information
			<i>Pre-test</i>	<i>Post-test</i>	
Experiment	-2.57	0.01	15.56	14.78	Significant
Control	-1.05	0.29	14.14	15.27	Not Significant

Based on the table above, it can be seen that the pre-test and post-test scores in the experimental group obtained a calculated statistical result (Z) of -2.57 with a significance value (2-tailed) of 0.01 ( $p < 0.05$ ). This shows that H<sub>1</sub> is accepted and H<sub>0</sub> is rejected, which means that there is a difference in self-compassion scores before and after phototherapy treatment. Therefore, it can be concluded that phototherapy can increase self-compassion in college students. Meanwhile, the pre-test and post-test scores in the control group obtained statistical calculation (Z) results of -1.05 with a significance value (2-tailed) of 0.29 ( $p > 0.05$ ). This showed that there was no difference in self-compassion scores before and after in the control group that was not given phototherapy treatment. The second hypothesis in this study was used to determine the difference in self-compassion in subjects after (post-test) given treatment in the form of phototherapy, namely the experimental group and post-test control group who were not given treatment.

**Table 4**  
*Results of the Mann-Whitney U Test Cohesiveness Test in the Experimental Group and Control Group*

Group	Z value	Sig	Category
Control-Experiment	-2.61	0.01	Significant

Based on the table above, it can be seen that the post-test score in the experimental and control groups obtained a calculated statistical result (Z) of -2.61 with a significance value (2-tailed) of 0.01 ( $p < 0.05$ ). This shows that H<sub>1</sub> is accepted and H<sub>0</sub> is rejected which means that there is a difference in self-compassion between the experimental group given phototherapy treatment and the group that is not given phototherapy treatment.

## DISCUSSION

This study discusses how the effect of providing phototherapy to increase self-compassion in college students. Phototherapy can increase self-compassion in students, because research conducted by Isti'adah and Nurfarhanah (2023) that phototherapy can be used as a method in guidance and counselling, this happens because the use of certain photos or images related to the subject's condition can help the subject to more easily express his feelings and thoughts and help the subject to recall an event.

Phototherapy to increase self-compassion was chosen because when someone sees a photo in the past, it will automatically remind them of the moment that is the source of their difficulty to be introspective. Then, the subject is asked to tell the picture to make the subject create mindfulness and awareness of the situation that has happened to him in the past. Then, the subject sees the results of the photo taken before the activity starts with a happy expression so that it can restore positive feelings to himself and increase common humanity in each subject.

The hypothesis in this study is to determine the effect of phototherapy on increasing self-compassion in students before and after phototherapy training analysis using the Wilcoxon test,

*Proceeding of International Conference on Healthy Living (INCOHELIV)*  
*(Volume 1, 2024)*

obtained the calculated statistical result ( $Z$ ) of -2.568 with a significance value (2-tailed) of 0.010 ( $p < 0.05$ ). The above results show that  $H_1$  is accepted and  $H_0$  is rejected, which means that there is a difference in self-compassion scores before and after being treated with phototherapy. Based on these results, it is explained that phototherapy has a negative and significant impact, meaning that phototherapy reduces self-compassion owned by students.

This is compared with the results obtained between the pretest and post-test in the control group, the statistical result ( $Z$ ) = -1.051 with a significance value (2-tailed) = 0.293 ( $p > 0.05$ ). This shows that the control group that was not given treatment in the form of phototherapy had no difference in the level of self-compassion scores before (pretest) and after (post-test). Then a paired sample t-test analysis was conducted using the Mann-Whitney analysis technique to prove the second hypothesis. Based on the results of the analysis conducted, it can be stated that  $H_1$  is accepted and  $H_0$  is rejected, which means that there is a difference in self-compassion between the experimental group given phototherapy treatment and the group not given phototherapy treatment. This is shown from the results of the calculated statistics ( $Z$ ) of -2.608 with a significance value (2-tailed) of 0.009 ( $p < 0.05$ ). These results state that there is a difference in self-compassion between the experimental group that was given phototherapy treatment and the group that was not given phototherapy treatment.

Susilo, et al (2021) also stated that the use of phototherapy data techniques helps the counselling session to be less boring, more meaningful, and can encourage subjects to discuss their point of view on the photo or image. However, it needs to be adjusted to the needs of the subject so that it can run effectively. Phototherapy is a place for the subject to pour out his feelings so that the subject can feel a sense of relief and calm after doing the therapy. According to Saita and Tramontano (2018) stimulus using photos has a significant impact both in the emotional, cognitive and expression aspects of individuals, groups, or communities. The stimulus that occurs is able to encourage and facilitate the mind's ability to communicate and manage emotions without being hindered by verbal communication problems to solve the problems faced.

Photos used in phototherapy are one form of art therapy, namely visual art therapy. Datu, et al (2022) state that one form of visual art therapy is photography. Phototherapy as a form of art therapy carried out succeeded in increasing self-compassion experienced by students. Madidar and Muhid (2021) also stated a similar thing, namely by doing positive activities such as art therapy, self-compassion can experience a significant increase. Angelika, et al (2019) obtained similar results, namely an increase in self-compassion after doing art therapy. Based on the explanation that has been done, it can be concluded that phototherapy training on increasing self-compassion in students is effective for increasing self-compassion owned by students.

## **CONCLUSION**

Based on the research that has been done, it can be concluded that the results of the study show that there is an effect of phototherapy on increasing self-compassion in students who are in the experimental group who have attended training, namely most subjects experience an increase in self-compassion and there are differences in self-compassion between experimental groups given treatment phototherapy with groups that are not given phototherapy treatment. Based on the conclusions above, it can be explained that phototherapy training can provide a difference in self-compassion in students and has an impact and is proven effective to increase self-compassion and increase self-understanding.

There are several difficulties faced in research, mainly due to the lack of journals about the research to be researched and the time of conducting experiments is short enough so that it is less able to describe in more detail about the influences that arise. Then the suggestion for the next researcher is to redevelop the existing theory and then analyse it further, because there has been no previous study that directly links the effect of phototherapy to self-compassion. In addition, further researchers are expected to do better maturation about the theory of phototherapy and further expand the research subject so that the results obtained are more varied and visible differences. Giving treatment to experimental groups can be done more effectively if done individually and not in groups, so that each subject can be immediately given good attention by the therapist and facilitator on duty.

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Proceeding of International Conference on Healthy Living (INCOHELIV)  
(Volume 1, 2024)

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*Proceeding of International Conference on Healthy Living (INCOHELIV)*  
*(Volume 1, 2024)*

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