

The Effectiveness of Psychoeducation on Depression Literacy and Psychological Well-being of University Students

Research Article

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ABSTRACT

Today's modern life is a challenging issue for human beings, particularly those who have mental illnesses like depression, requiring awareness-related programs for increasing their Depression Literacy (D-Lit) and Psychological Well-being (PWB). To mark the gap, we planned to investigate the effect of web-based psychoeducation on literacy regarding depression and psychological well-being. A total of 100 depressed students were included in the sampling frame, purposively selected based on some inclusion and exclusion criteria from Jagannath University. The study was accomplished by following a pretest-posttest with a control group design where data were collected using Depression, Depression Literacy (D-Lit), and Psychological Well-being questionnaires along with a personal information form. The data were analyzed by applying an independent sample *t*-test, paired sample *t*-test, and ANCOVA. Results revealed that the level of D-Lit and PWB of the depressed students significantly increased in the post-test as compared to the pre-test in the experimental group, but no significant changes in the control group, indicating psychoeducation has an effect on increasing D-Lit and PWB. This finding explored that psychoeducation can be an immediate awareness program for improving depression-related knowledge and psychological well-being in the community. The applications of these outcomes for investigation and practice are discussed.

Keywords: *Psychoeducation, Depression Literacy, Psychological Well-being*

1. Introduction

University life of students can be stressful because of the start-up process, exam pressure, coursework deadlines, living with strangers, or thinking about the future. Of these pressures, students encountered

some difficulties, generally called mental health crises (Hood et al., 2021). A recent study carried out on Bangladeshi university students showed that depression, anxiety, and stress were prevalent among them which accounted for 52.2%, 58.1%,

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and 24.9%, respectively (Mamun et al., 2022). Likewise, another study conducted during COVID-19 stated that 47.40% of university students experienced stress, 43.29% reported anxiety and 30.41% felt depression (Rahman et al., 2022). Consequently, the proportion of suicidal attempts increased gradually among university students where female students' rates were double that of male students (Rasheduzzaman et al., 2022).

What should be done to minimize the extent of mental health problems and boost depression literacy and well-being among university students? For this, treatment of mental disorders and increasing awareness of mental health issues among students should be done. Treatment of mental disorders, especially depression, psychotherapy, and counseling might be effective measures (Dobson, 1989). However, students are reluctant to receive counseling programs from their institutions (Macaskill, 2013). May be the social stigma that hinders students from receiving help from counseling sessions (Carlbring et al., 2007, Union Futures Project, 2018). Similarly, excessive costs are related to depression treatment (Carlbring et al., 2007) and many students do not put their names in the records book (Chew-Graham et al., 2003). These are some probable reasons for not receiving treatment for depression.

For this reason, as researchers, it is considered that psychoeducation is essential in mental health protection in addition to treatment and eliminating mental health problems. Psychoeducation might be an intervention tool to improve the well-being of university students (Hood et al., 2021). The American Psychiatric Association (APA) defined psychoeducation as developing knowledge in the subject areas that assist in the goals of treatment and rehabilitation (Baum et al., 2006). This is an inexpensive intervention that focuses on skills teaching, goal setting, communications skills, assertiveness training, and so on for improving well-being status (Colom & Lam, 2005; Christensen et al., 2006; MacKinnon et al., 2008).

Psychological well-being refers to the combination of functioning with optimal effectiveness in both personal and social life and positive affective states like happiness (Deci & Ryan, 2008). On the other

hand, depression literacy (D-Lit) is an important type of mental health literacy which is characterized by the ability to identify depression and make a treatment plan for this (Wang et al., 2007). Empirical evidence indicates that psychoeducation increases depression literacy and psychological well-being. For example, Muriungi and Ndeti (2013) conducted a study and documented that psychoeducation was effective in reducing the severity of depression among medical students. Duran et al. (2020) conducted a study on Portugal university students and found that there were significant differences between pre and post-test regarding the capacity to identify symptoms of depression, causes, and choose the appropriate treatment plan for depression because of psychoeducational intervention. Similarly, another randomized controlled trial study led by Günaydin (2022), revealed that psychoeducation helped nursing students to tackle their depression levels. A meta-analysis also showed that psychoeducation can contribute to lessening the severity of depression (Donker et al., 2009). However, studies are scarce regarding psychoeducation and its impact on psychological well-being. In one study, Hood et al. (2021) found significant differences in well-being between the experimental and control groups due to psychoeducation, where the experimental group reported better well-being than their counterparts. Empirical evidence also suggested that psychoeducation was effective in enhancing psychological well-being. (Makama et al., 2019).

The above literature reviews showed that most of the studies were conducted in Western culture. For instance, empirical evidence states that psychoeducation improves knowledge about depression and boosts psychological well-being (Donker et al., 2009; Hood et al., 2021). However, some studies were conducted on Bangladeshi university students regarding the effects of depression literacy on reducing depression, assisting students to be aware of it along with coping techniques (Bhuiyan et al., 2020; Mamun et al., 2020). However, there is no published study so far about the effectiveness of psychoeducation on depression literacy and psychological well-being among university students. Therefore, the present study was intended to meet this literature gap.

Research Objectives

The key aim of this investigation was to test the effectiveness of psychoeducation on depression literacy and psychological well-being among university students. The specific objectives are given below.

- i. To examine whether there is any significant difference in depression literacy and psychological well-being between the pre-test and post-test of the experimental group (received psychoeducation);
- ii. To explore whether there was any significant difference in post-test scores of depression literacy and psychological well-being between the pre-test and post-test of the experimental and control groups.

2. Materials and Methods

2.1 Sample and Sampling Techniques

At first, by following the purposive sampling technique, a total of 100 targeted participants were

selected based on some inclusion (e.g., having the willingness to participate in the study through giving informed consent, depression scores < 94, and having access to an internet connection and skills to use an electronic device) and exclusion criteria (e.g., showing unwillingness or inability to participate in the program, absence of more than two or back-to-back sessions, and participating simultaneously in other therapy programs and/or receiving individual or personal counseling) from the Jagannath University of Bangladesh. After the screening, all participants were equally divided into two groups (i.e., control & experimental group) through counter-balancing techniques.

2.2 Research Design

The present investigation was conducted by following a pretest-post-test with a control group design under a quasi-experimental design to see the impact of web-based group psycho-education on depression literacy and psychological well-being among depressed students. The design of the study is shown in the subsequent figure-

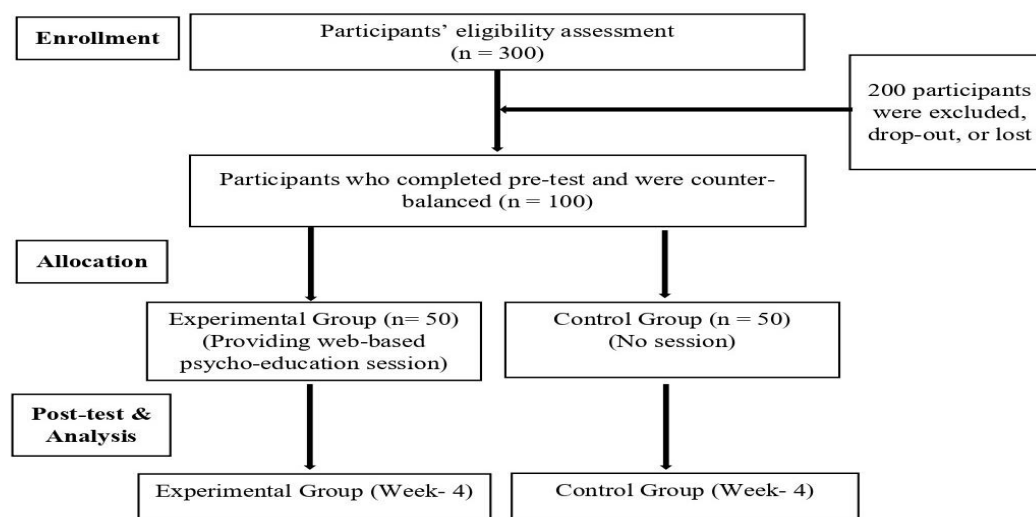


Figure 1. Flow chart of the study design.

2.3 Measuring Instruments

2.3.1 Personal Demographic Questionnaire. The study used a personal information form to collect information about the participant's gender, age, academic year, socio-economic level, religion, marital status, types of family, and residence.

2.3.2 Adapted Bangla Version of Depression Scale.

The Bangla version of the depression questionnaire (Uddin & Rahman, 2005) was adapted from the Beck Depression Inventory (Beck et al., 1996). The questionnaire was a 5-point Likert-type scale containing 30 items. The response

options were “not at all applicable = 1”, “not applicable = 2”, “uncertain = 3”, “a bit applicable = 4”, and “totally applicable = 5”. An individual’s total score was obtained from the sum of the scores of all 30 items. A higher score indicates higher depression and vice versa. The reliability of the Bangla version of this scale is .67. The test-retest and split-half reliability were found .60 and .76, respectively. Using concurrent and construct validity, the validity of the scale was estimated.

2.3.3 Adapted Bangla Version of the Depression Literacy Questionnaire. The original Depression Literacy (D-Lit) Questionnaire was developed by Griffiths et al. (2004) which has 22 items. The Bangla version was adapted by Arafat et al. (2017). It has 20 items with three response categories (i.e., *yes, no, do not know*). For each correct response ‘1’ is given, whereas ‘0’ is given for incorrect and ‘do not know’ responses. The scores of this scale ranged from 0 – 20 where higher scores indicate

higher depression literacy. The internal consistency reliability of the Bangla version was measured by Cronbach’s alpha, which was found to be .77. Face, content, and construct validity were assessed and found satisfactory.

2.3.4 Adapted Bangla Version of Psychological Well-being Scale. Bairagi et al. (2021) adapted the Bangla version of this scale (originally developed by Ryff, 1989). This scale has different versions (e.g., 84, 54, 42, and 18 items). Here, the 54-item form was used. This form was divided into six subscales (e.g., autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance). Respondents rate statements on a scale of ‘1 = *strong disagreement*’ to ‘6 = *strong agreement*’ for positive items and reverse for negative items. The respondents with high scores indicate they have high psychological well-being and vice versa.

Table 1. Session Structure of the Study

Session	Duration	Activities
1 st session	90min	<ul style="list-style-type: none"> ➤ First contact with the group ➤ Introducing the group’s rules ➤ Briefing about their illness ➤ Information on the relationship between depressive symptoms and chronic pathology
2 nd session	45min	<ul style="list-style-type: none"> ➤ Behavioral activation ✓ Monitoring daily activities ✓ Scheduling and carrying out meaningful activities
3 rd session	45min	<ul style="list-style-type: none"> ➤ Self-care ✓ Healthy diet ✓ Sleep hygiene ✓ Meditation ✓ Physical activities ✓ Physical exercise ➤ Therapeutic compliance
4 th session	45min	<ul style="list-style-type: none"> ➤ Problem-solving training ➤ Communication skills ➤ Social skills
5 th session	45min	<ul style="list-style-type: none"> ➤ Self-esteem ➤ Assertiveness ➤ Strengthen self-expression
6 th session	45min	<ul style="list-style-type: none"> ➤ Summarizing last week’s session contents ➤ CBT perspective ➤ Group farewell ➤ Final evaluation

2.4 Procedure

At first, all the questionnaires were administered to 300 students at Jagannath University, and from there 100 students were recruited for participation based on inclusion-exclusion criteria. To clarify the process of filling up the questionnaires, both written and verbal instructions were provided to participants. The selected students were assigned into two groups (i.e., experimental & control groups) by counterbalancing technique. After that, the students of the experimental group received sessions on psychoeducation. The training program was implemented within six sessions (twice a week). The sessions were taken online (zoom platform) every week. The first session was 90 minutes; after that, every session took 45 minutes. Here, the students of the control group did not receive any sessions. In the post-assessment phase, the same questionnaires were again administered to all participants of both groups with an interval (approximately 04 weeks) from the pre-test phase. After taking all the required information, students were cordially thanked for their help and cooperation.

2.5 Ethical Issues

After briefing about the general objectives of the study to each respondent, informed consent was taken during the pre-assessment phase. The participants were also guaranteed that their all

information would be retained confidential and used only for research purposes. Besides, they can withdraw their participation at any time. To avoid ethical violations, the participants of the control group were referred to appropriate places to take these types of support.

3. Results

According to the research objectives, the collected data were analyzed by applying both descriptive “(e.g., mean, standard deviation, frequency, percentage)” and inferential statistics “(e.g., independent sample *t*-test, paired sample *t*-test, and ANCOVA)” using software, called Statistical Package for Social Science (SPSS) version 25 and excel, showing the findings in the following tables and histogram consecutively. Before applying inferential statistics, the normality of the Depression Literacy (D-Lit) and Psychological Well-being (PWB) scores was checked, where the skewness values were found to be less than 2 and kurtosis values less than 4 (Kline, 1998), and the *p*-values of the Shapiro-Wilk and Kolmogorov-Smirnov test values are above .05, representing the variable is normally distributed. Before making two equivalent groups, a series of independent sample *t*-tests was carried out to check whether socio-demographic factors significantly varied with outcome variables. The findings are presented in Table 2.

Table 2. Sample characteristics and testing homogeneity between groups using *t*-test based on Depression Literacy (D-Lit) and Psychological Well-being (PWB) scores.

Socio-demographic Variables		<i>t</i> -value (<i>n</i> = 100)		Experimental (<i>n</i> = 50)	Control (<i>n</i> = 50)
		D-Lit	PWB	<i>f</i> (%)	<i>f</i> (%)
Gender	Male	-.60	3.05**	25(50.0)	25(50.0)
	Female			25(50.0)	25(50.0)
Age	21-23	.19	-.71	20 (40.0)	20 (40.0)
	24-26			30(60.0)	30(60.0)
Education	Honors	.09	-.78	19(38.0)	19(38.0)

Socio-demographic Variables		<i>t</i> -value (<i>n</i> = 100)		Experimental (<i>n</i> = 50)	Control (<i>n</i> = 50)
		D-Lit	PWB	<i>f</i> (%)	<i>f</i> (%)
Religion	Masters			31(62.0)	31(62.0)
	Islam	.22	-.82	24(48.0)	24(48.0)
	Hindu			26(52.0)	26(52.0)
Family Type	Nuclear			26(52.0)	26(52.0)
	Joint	-1.11	-.25	24(48.0)	24(48.0)
SES	Lower	.48	-1.19	03(06.0)	03(06.0)
	Middle			47(94.0)	47(94.0)
Marital Status	Married			19(38.0)	19(38.0)
	Unmarried	-1.04	-2.10*	31(62.0)	31(62.0)
Residence	Residence			30(60.0)	30(60.0)
	Non-residence	-.55	1.33	20(40.0)	20(40.0)

Note. ** $p < .01$, * $p < .05$, *D-Lit* = Depression Literacy, *PWB* = Psychological Well-being.

Table 2 showed that only PWB was significantly varied due to the variation of gender and marital status. On the other hand, since these groups were formed through counter-balancing, it can be confirmed that both groups are equal and are

effects-free from external factors.

To compare the mean difference of D-Lit and PWB between the two groups in terms of pre-test and post-test, MS Excel was used, and the findings were reported in Figures 2 and 3.

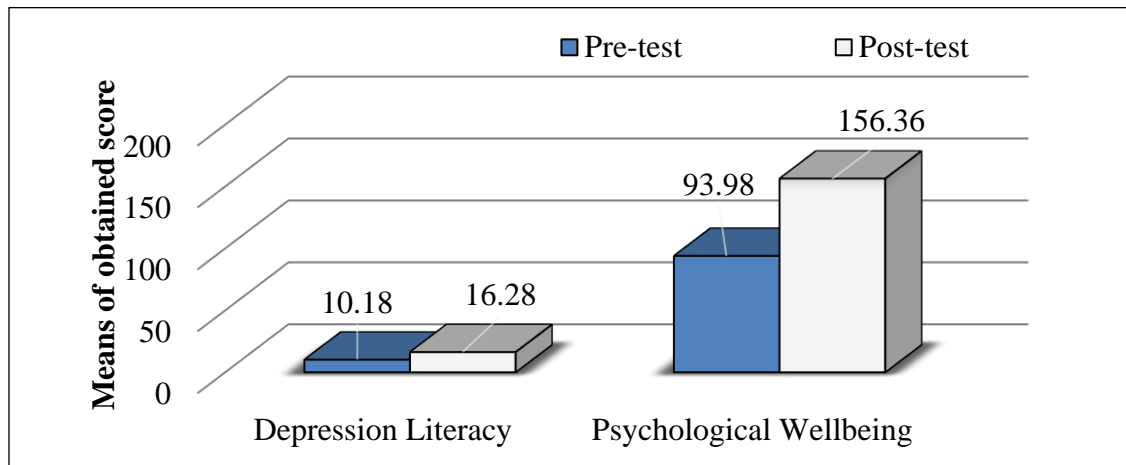


Figure 2. Mean comparison between pre-test and post-test of the experimental group in terms of Depression Literacy (D-Lit) and Psychological Well-being (PWB).

The graphically presented results in Figure 2 revealed that in the experimental group, the level of D-Lit and PWB of the students increased, from the pre-test ($M = 10.18$) to the post-test ($M = 16.28$)

and pre-test ($M = 93.98$) to post-test ($M = 156.36$), respectively. These findings indicate that the level of D-Lit and PWB has increased due to providing psychoeducation.

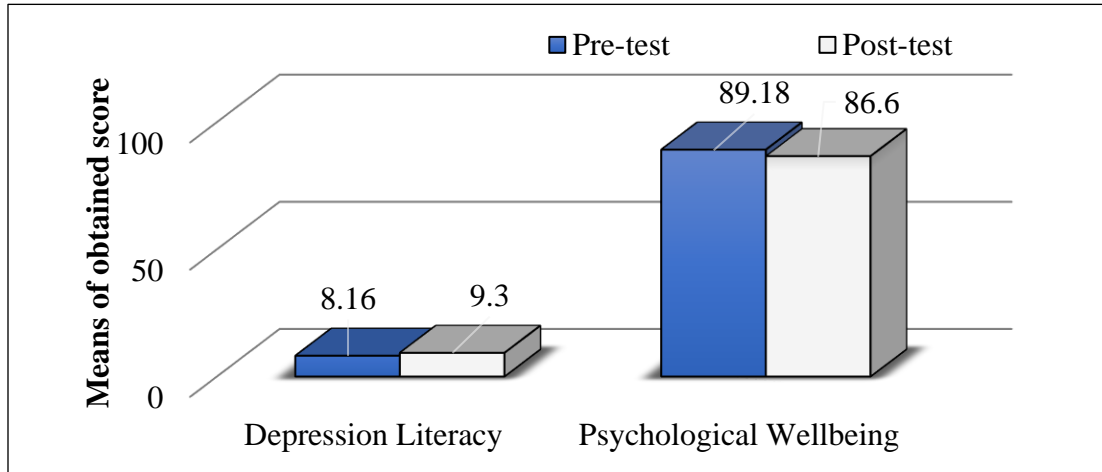


Figure 3. Mean comparison between pre-test and post-test of the control group in terms of Depression Literacy (D-Lit) and Psychological Well-being (PWB).

The graphically presented results in Figure 3 revealed that in the control group, the level of D-Lit of the students increased in a minimal amount from the pre-test ($M = 8.16$) to the post-test ($M = 9.3$), and PWB of the students decreased from pre-test

($M = 89.18$) to post-test ($M = 86.6$).

To explore whether the experimental group's mean differences were significant, a paired sample t -test was applied. The findings are presented in Table 3.

Table 3. Comparative outcome of paired-sample t -test values of D-Lit and PWB in terms of the pre-test and post-test in the experimental group.

Outcome Variable	Pre-test		Post-test		t
	M	SD	M	SD	
Depression Literacy (D-Lit)	10.18	3.38	16.28	2.01	-10.42***
Psychological Well-being (PWB)	93.98	12.14	156.36	20.55	-16.67***

Note. *** $p < .001$.

The findings reported in Table 3 showed that those who received psychoeducational sessions had a significant increase in the level of D-Lit ($t = -10.42$, $p < .001$) and PWB ($t = -16.67$, $p < .001$), indicating psychoeducation significantly can

increase D-Lit and PWB among depressed students. To compare the differences between the two groups, one-way ANCOVA was applied, and findings have been presented in Table 4.

Table 4. Analysis of Covariance (ANCOVA) model representing experimental and control groups on the post-test score while covariate pre-test score of D-Lit and PWB.

Source	Type III Sum of Squares	df	Mean Square	F	Partial Eta Squared
D-Lit Pre-test (covariate)	.015	1	.015	.002	.00
Group	1111.55	1	1111.55	128.58***	.57
Error	838.57	97	8.65		

PWB	Pre-test (covariate)	672.89	1	672.89	2.66	.027
	Group	120268.58	1	120268.58	476.23***	.831
	Error	24496.63	97	252.54		

Note. *** $p < .001$, D-Lit = Depression Literacy, PWB = Psychological Wellbeing.

Results presented in Table 4 revealed a significant difference in the post-test score of D-Lit [$F(1, 97) = 128.58, p < .001$] and PWB [$F(1, 97) = 476.23, p < .001$] between the two groups while adjusting for pre-test score of D-Lit and PWB, respectively, triggering psychoeducation increases D-Lit and PWB in the experimental group than the control group. Besides, 57% of the variance in D-Lit and 83.1% of the variance in PWB of the total remaining scores happened because of the effect of psychoeducation.

4. Discussion

The study aimed to examine the effectiveness of web-based psychoeducation in increasing knowledge regarding depression and psychological well-being. The first objective was to examine whether there was any significant difference in depression literacy and psychological well-being between the pre-test and post-test of the experimental group. Results presented in Table 3 revealed a significant difference in depression literacy and psychological well-being of participants in the experimental group. Here, the participants had more depression literacy in the post-test than in the pre-test. Results also indicated that the participants had more psychological well-being in the post-test than in the pre-test. It indicated that after receiving psychoeducation, the participant's depression literacy and psychological well-being has been increased. These results are supported by previous research results of Durán et al. (2020). They found significant differences between the pretest and posttest regarding depression literacy among university students. Similarly, psychological well-being also varied from pretest to posttest which was supported by Hood et al. (2021), who documented significant differences between both groups in psychological well-being after psychoeducational intervention. Bada (2013) also examined the effectiveness of psychoeducation training in the improvement of the psychological well-being of spouses of incarcerated

males in Ibadan, Nigeria. A total of 16 spouses of male inmates participated in the study. He used the pre-test and post-test quasi-experimental research design. His study revealed that psychoeducation training had a significant effect on the psychological well-being of partners of prisoners.

The second objective was to investigate whether there was any significant difference in post-test scores of depression literacy (D-Lit) and psychological well-being (PWB) between the experimental and control groups. Results shown in Table 4 indicated a significant difference (in the case of the post-test) in depression literacy and psychological well-being between the experimental and control groups. This result is supported by previous studies. For example, Donker et al. (2009) carried out meta-analyses on psychoeducation for depression and stated that participants with depression found significant reductions in depressive symptoms. Muriungi and Ndeti (2013) also investigated the effectiveness of psychoeducation on depression, hopelessness, suicidality, anxiety, and substance use among basic diploma students at Kenya Medical Training College. They found that there was no significant reduction in symptom severity between the experimental and control groups at three months but that there was a significant difference at 6 months of intervention. The reason behind this is that psychoeducation promotes knowledge about depression and helps to feel more in control of their health. It can also lower the stigma about depression and direct people to treatment options. Makama et al. (2019) also found that the experimental group scored higher on psychological well-being than the control group after intervention. The reason is that psychoeducation helps to alleviate the development of poor mental well-being.

This study has some limitations. Firstly, a small number of samples were selected only from Jagannath University. Secondly, the number of

sessions was limited. Despite these drawbacks, the findings of this study reveal that psychoeducation is an important program through which depression literacy and the psychological well-being of students can be improved. The need for literacy about depression and psychological well-being especially among students is necessary for their healthy life. Therefore, this study recommends that the authorities should provide special training for their students that will help to increase their literacy as well as improve their psychological functioning which will directly and positively impact their academic performance. Students in universities should also experience psychological assessment to find out their level of mental well-being.

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