

Effectiveness of Self-Esteem Based Interventions to Enhance Self Esteem and Academic Achievement among Undergraduate Students

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Abstract

Self-esteem plays a vital role as a contributor for achievement. This study is proposed to examine the effects of self-esteem interventions towards academic achievement. Research was conducted with Pretest-posttest of quasi-experimental design. Three groups from undergraduate psychology program (n=90), (male=12, female=78), (age 22-25) were selected with convenient sampling method. The Rosenberg self-esteem (Rosenberg 1965) scale was used to assess self-esteem, and grades were collected from academic division after the completion of academic semester. Students were divided in three groups' intervention group (n=30), placebo group (n=30) and control group (n=30). All groups received different treatment based on group plan, per week 45 minutes, for 12 weeks. Intervention group received self-esteem interventions, and placebo group were provided with some material related to self-esteem, control group received only sessions for discussion related to their activities per week. Results of One way MANOVA analysis revealed that there was significant variation ($p < 0.05$) of self-esteem score between the results of three groups, the intervention group self-esteem was significantly higher than the placebo and control group. There was significant difference in scores of higher academic achievement among intervention group. Study concluded that student's academic achievements were increased with increased level of self-esteem. Self-esteem interventions are effective for further the better implication and outcome in education.*

Keywords: self-esteem, academic achievements, interventions, group.

1. Introduction

Self-esteem is perception that individuals have of themselves. Self-esteem, largely is acquaint of person's overall feelings of acceptance and respect for themselves (Rosenberg et al. 1995). The study of self-esteem has persisted for many years because many are convinced that high self-esteem produces constructive outcomes and low self-esteem is at the root of many personal and academic permanence issues (Stets and Burke 2014). Subjective experience creates the impression that self-esteem rises when one perform great, wins a contest, saves an award, solves a problem, or gains acceptance to a social group, and that it falls with corresponding failures, at the same time, high self-esteem inspire people to perform better as compare to the people with low self-esteem (Karcher 2009). This pervasive correlation may well strengthen the results that one's level of self-esteem is not just the outcome, but indeed the cause, of life's major successes and failures (Baumeister et al. 2003). Self-esteem, as an individual's feeling of worth and personal confidence has been suggested to play an important part towards the desire and ability to perform good academically, and its most important variable to related with high motivation toward good academic performance . (Keltikangas-järvinen 2020). Relationship between academic achievement and self-esteem is positively correlated therefore, it is very imperative to investigate the interventions or behavior which can influence motivation and self-esteem, and can improve academic performance among students (Affum-osei et al. 2014). Self-esteem has been identified as a contributing factor in increasing students' perceived learning competence and motivation towards achievement (Jonathan Ohrt 2015). Students' attitude and perception in their efficacy, can predict their self-regulated learning and their academic achievement. Self-esteem was indirectly related to university student's achievement and their mature career attitudes. People experience changes in their self-esteem, can effects their efforts and performances in short term or long term, it increase the chances of success (Orth, Erol, and Luciano 2018). To apply interventions based on self-esteem perception can provide a clear self-view, expectations and directions, this can lead towards sense of stability and predict the personal ability toward achievement (Luan et al. 2018). Self-esteem is an important psychological factor contributing to health and quality

of academic life and life in general. Recently, several studies have shown that subjective well-being significantly correlates with high self-esteem, and that self-esteem accounts for significant variance in both mental well-being and academic achievement, the relationship between self-esteem and academic achievement has been well documented in the literature. A variety of studies have reached the conclusion that academic achievement and self-esteem are positively correlated (Haddad Narafshan and Noori 2018).

Theory and prior research suggest that a positive sense of self-esteem and perceived control over one's outcomes ease constructive responses to negative outcomes (Bergagna and Tartaglia 2018). It predicted that encouraging students to maintain their sense of self-worth and construe their academic outcomes as controllable would promote achievement. (Forsyth et al. 2007) Psychological interventions based on self-esteem exercises, enhance person's ability to perform better on any task, it contribute to flourish person's functioning in society (Lin-Siegler, Dweck, and Cohen 2016). Interventions to enhance self-esteem could appear in many different forms such as individual, group, self-administered or administered by professional. There are many standardized and wide range of interventions focused to promote self-esteem among adults (Rizwan and Ahmad 2015). Those exercises are strong modulators and induce better cognitive and behavior performance toward academic achievement (Adamson et al. 2019). In education setting the concept of building self-esteem along with academic performance vital and much required. Nationally the number of Malaysian students suffering from low self-esteem has risen from ten-percent to twenty-percent, meaning that low self-esteem currently affects one-in-five Malaysian students. Given that low self-esteem is a strong predictor of many detrimental life outcomes like poor academic performances. The looming 'self-esteem crisis' represents a serious problem for Malaysian students (Ng and Page 2018). Present research is experimental design to conduct self-esteem boosting exercises interventions session for undergraduate students to enhance the self-esteem and academic performance.

Interventional studies are often prospective and are specifically tailored to evaluate direct impacts of treatment or preventive measures. Interventional research studies include three elements definition and measure of intervention in two or more groups, measure outcome and statistical comparison between groups to assess the interventions effectiveness (These 2014). Group therapy interventions refer to a format of interventions where several participants taking part in a psychological intervention aimed at helping them changing their perceptions and thought process, directed by a therapist or counselor. Group interventions have many advantage towards improving self-perceptions (Fennell 2006) and behavioral issues, during group interventions students can learn from other group members and the comfort that others are also going through same facts can help them to review things differently have important advantages and are thus suitable for several types of problems, mainly those involving interpersonal issues (Gidron 2013). Cognitive behavioral therapy is the most researched treatment proven to be effective in helping build self-esteem (Adamson et al. 2019). Cognitive behavioral therapy is the leading-edge treatment of choice for most psychological problems especially in building self-esteem. It is designed to be brief, problem-focused, and active to work on desired outcome. Cognitive restructuring (Montreuil et al. 2016) is a combination of recognizing unhelpful thinking patterns about self-esteem, and replacing them with more effective thinking patterns to improve self-esteem. Cognitive restructuring for low self-esteem often focuses on identifying negative thoughts about oneself, and identifying distorted thinking, such as labeling oneself as a failure due to one skills deficit or negative event (Cooper 2011). Students university life is challenging now a days with many demands and it constantly needs the self-esteem boosting activities and interventions to help the students to sustain their motivation and self-efficacy (Haddad Narafshan and Noori 2018). Current study is based on intervention design to evaluate the effectiveness of self-esteem related intervention among three groups, intervention group, placebo group and control group.

2. Method

Pretest- posttest control group quasi experimental design was used for current study. The study was conducted as group interventions for 12 weeks, with pre and post assessment. The students were distributed in three groups, intervention group, received self-esteem based intervention, placebo group

received weekly hand-outs based on self-esteem books and programs, and control group were provided with discussion sessions related to their academic problems. Each group received session once a week for 45 mints.

Population and sampling: The sample size required for the proposed study was 90 participants, 30 participants respectively in each of the three groups, intervention, and placebo and control group. This number was obtained by setting the effect size as 0.25, following the medium effect size for one way Moncova with the error probability at 0.05, power at 0.80, number of groups to three and measures at two at G-power software. The numbers of participants recruited for research was 90, which were distributed in Three (3) groups equally using conveniently sampling. The reference population was the undergraduate students in Malaysian Public University, Faculty of Human Development, SultanIdris Education University. The participants were required to meet inclusion criteria, must be 18 years old and above, should be an undergraduate student from the Faculty of Human Development, UPSI. Participants must provide informed consent to participate in the study. Participants should be Malaysian and have basic proficiency in English language.

Ethical concern: The ethical procedure was followed by the Research and Management Innovation Center (RMIC/UPSI) with reference no (2019.002301). Research followed the ethical guideline related the confidentiality, voluntarily participation, and rights to with draw from study. Students were agreed to participate in the study with their own willingness.

Material: self-esteem scale of Rosenberg (Rosenberg 1965) was used for pre and post assessment of self-esteem score within three groups. Data for CGPA was retrieved with permission from students and academic after the completion of academic semester. The intervention material was obtained from the cognitive behavior therapy manual (Muñoz and Miranda 2000) to implement in group sessions for intervention group every week and placebo group received only handouts of Cognitive behavior therapy interventions for self esteem, every week session.

Study procedure: An online link was shared with the students for recruitment process in the research study. After receiving their confirmation and voluntarily participation, students were distributed with convenient sampling in three groups. The group’s allocation was conducted through blind procedure (Alessandri, Zuffianò, and Perinelli 2017), so no group members were revealed which group they belongs, for participants groups were named as 1,2,3 groups. All students in three groups received activity differently for 12 week (per week/45 minutes) session. Group therapy is a form of treatment in which participants are placed in a group, guided by therapists for the purpose of helping individuals to bring a change in them. It helps individuals to enhance their self-esteemthrough purposeful group experiences and to cope more effectively with their personal, group or community problems. Group-based psychosocial interventions based on cognitive behavioral therapy (CBT) may have an effect on measures of behavior change (Ezhumalai et al. 2018). In the current study procedure group therapy interventions were implemented with three groups, interventions, and placebo and control group. All the groups’ received different information’s based on their target group. Pre and post assessment of 12 weeks (per week/45 mints) sessions were conducted to see the statistical analysis of the administered scale and academic grads were retrieved from academy to assess the difference in grads and self -esteem scores after intervention session. Group planning for 12 weeks were following:

Groups	Participants	Sessions
Intervention	30 Participants	1- Briefing and pre assessment of self esteem 2- identifying strengths and weakness (Llc 2018) 3- discussion to improvise strengths and reduce weakness 4 – Traid model of cognitive Behavior Therapy for self-talk (Hui and Zhihui 2017) 5- Personal goals (Bruhn et al. 2016)

		6- self affirmation techniques with mindfulness (WebND 2017) 7- positive self-talk 8 – Gratitude list (Llc 2018) 9- working on personal goals (Muñoz and Miranda 2000) 10- self affirmation exercises 11- Positive social comments (Koutra, Katsiadrami, and Diakogiannis 2010) 12- feedback and post assessment
Placebo	30 Participants	1- Briefing and pre assessment 2 to 11- discussion on hand-out related to self-esteem building (Llc 2018); (Muñoz and Miranda 2000) 12- feedback and post assessment
Control	30 Participants	1- Briefing and pre assessment 2 to 11- daily routine discussion 12- feedback and post assessment

3. Results

Results were analysed by using one way Manova , the statically analysed of group comparison, multivariate and post hoc analysis was reported following

Table 1

Descriptive Statistics differences in self-esteem score and CGPA among groups

	GROUP	Mean	Std. Deviation	N
Difference self esteem	intervention	8.93	3.814	30
	placebo	3.43	3.036	30
	control	2.73	2.463	30
	Total	5.03	4.182	90
CGPA	intervention	3.8833	.17036	30
	placebo	3.7667	.18492	30
	control	3.7750	.13693	30
	Total	3.8083	.17194	90

Table shows that an inspection of the mean scores indicated that intervention group reported higher levels of difference of mean between pre- and post- intervention ($M = 8.93$, $SD = 3.81$) compared to placebo ($M = 3.43$, $SD = 3.04$) and control ($M = 2.73$, $SD = 2.46$) group. However, the gap between means were closer for CGPA, in a way that intervention group reported slightly higher levels of

CGPA ($M = 3.88$, $SD = 0.17$) compared to placebo ($M = 3.77$, $SD = 0.18$) and control group ($M = 3.78$, $SD = 0.14$.)

Table 2

ANOVA

DIFFERENCES IN SELF-ESTEEM SCORE AMONG GROUPS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	691.800	2	345.900	34.786	.000
Within Groups	865.100	87	9.944		
Total	1556.900	89			

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
GROUP	Difference of self esteem	691.800	2	345.900	34.786	.000	.444
	CGPA	.254	2	.127	4.651	.012	.097

a. R Squared = .444 (Adjusted R Squared = .432)

b. R Squared = .097 (Adjusted R Squared = .076)

Both dependent variables which are mean of difference in pre-and post- intervention ($p = .001$) and CGPA ($p = 0.012$) revealed significance values of less than the cut-off. Thus, they are both differs between each group intervention.

Table 3

Multivariate tests

Self-esteem score and CGPA among groups

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.998	23891.922	2.000	86.000	.000	.998
	Wilks' Lambda	.002	23891.922	2.000	86.000	.000	.998
	Hotelling's Trace	555.626	23891.922	2.000	86.000	.000	.998
	Roy's Largest Root	555.626	23891.922	2.000	86.000	.000	.998
GROUP	Pillai's Trace	.456	12.841	4.000	174.000	.000	.228
	Wilks' Lambda	.546	15.220	4.000	172.000	.000	.261

Hotelling's Trace	.831	17.653	4.000	170.000	.000	.293
Roy's Largest Root	.828	36.008	2.000	87.000	.000	.453

a. Design: Intercept + GROUP

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

The significance level was less than 0.05. In the study, a Wilk's Λ value of .546, with a significance value of .001 is obtained. This is less than .05 signifying there is a statistically significant difference between each group intervention in terms of their difference in mean of pre- and post- intervention and CGPA. There was a statistically significant difference between males and females on the combined dependent variables, $F(4, 172) = 0.546, p = .001$; Wilk's $\Lambda = .55$; partial $\eta^2 = .26$. When the results for the dependent variables were considered separately, using a Bonferroni adjusted alpha level of .025, both difference were found for mean between pre- and post- intervention, $F(2, 87) = 34.79, p = .001$, partial $\eta^2 = .26$, and CGPA, $F(2, 87) = 4.56, p = .012$, partial $\eta^2 = .26$.

Table 4

Multiple Comparisons

Tukey HSD

(I) GROUP	(J) GROUP	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
intervention	placebo	5.500*	.814	.000	3.56	7.44
	control	6.200*	.814	.000	4.26	8.14
placebo	intervention	-5.500*	.814	.000	-7.44	-3.56
	control	.700	.814	.667	-1.24	2.64
control	intervention	-6.200*	.814	.000	-8.14	-4.26
	placebo	-.700	.814	.667	-2.64	1.24

*. The mean difference is significant at the 0.05 level.

The table above shows that for mean scores for intervention group were statistically significantly different between Placebo and control group. ($p < .0005$)

Figure 1

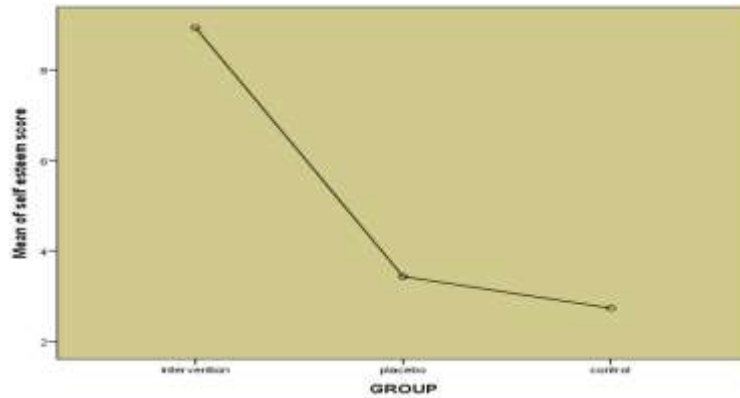


Figure 1: revealed that there was significant mean values difference in score between pre- and post-intervention ($M = 8.93$, $n = 30$), compared to placebo ($M = 3.43$, $n = 30$) and control ($M = 2.73$, $n = 30$) group

Figure 2

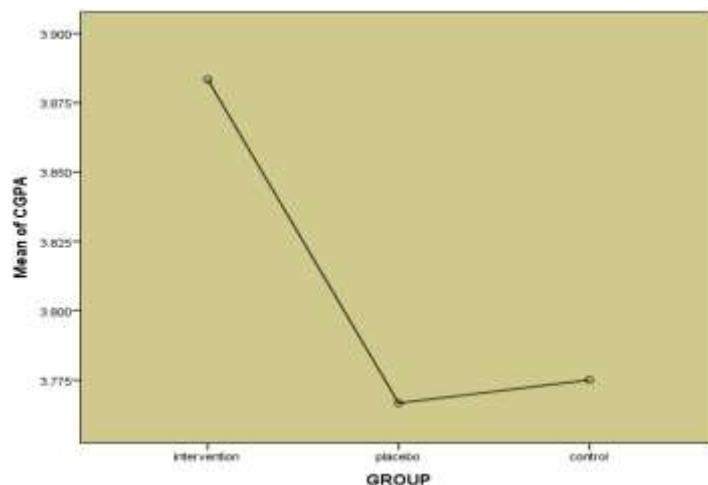


Figure 2 revealed, intervention group reported slightly higher levels of CGPA ($M = 3.88$, $n = 30$) compared to placebo ($M = 3.77$, $n = 30$) and control group ($M = 3.78$, $n = 30$)

4. Discussion

Results from three groups established that students from intervention group showed statically differences in self-esteem scores and CGPA as compared to placebo and control groups. The analysis revealed the group intervention were effective to enhance self-esteem and academic achievement among undergraduate students. A one-way between-groups multivariate analysis of variance was performed to investigate group condition differences in the difference of mean between pre- and post-intervention and CGPA. Thus here two dependent variables were used which were differences in the difference of self-esteem score of mean between pre- and post- intervention and CGPA whereas the independent variable was group condition. Preliminary assumption testing was conducted to check for sample size, normality, linearity, unilabiate and multivariate outliers, and multicollinearity, with no serious violations noted. There was a statistically significant difference on the combined dependent variables, $F(4, 172) = 0.546$, $p = .001$; Wilk's $\Lambda = .55$; partial $\eta^2 = .26$. When the results for the dependent variables were considered separately, using a Bonferroni adjusted alpha level of .025, both

difference were found for mean between pre- and post- intervention, $F(2, 87) = 34.79, p = .001$, partial $\eta^2 = .26$, and CGPA, $F(2, 87) = 4.65, p = .012$, partial $\eta^2 = .26$. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for intervention ($M = 8.93, SD = 3.81$) was significantly different from placebo ($M = 3.43, SD = 3.04$) and control ($M = 2.73, SD = 2.46$). On the other hand, there is no difference between mean intervention of placebo ($M = 3.43, SD = 3.04$) and control ($M = 2.73, SD = 2.46$). Same trends found in analysis on CGPA where post-hoc comparisons using the Tukey HSD test indicated that the mean score for intervention ($M = 3.88, SD = 0.17$) was significantly different from placebo ($M = 3.77, SD = 0.18$) and control ($M = 3.78, SD = 0.14$). On the other hand, there is no difference between mean intervention of placebo ($M = 3.77, SD = 0.18$) and control ($M = 3.78, SD = 0.14$).

A number of studies have shown the effect, self-esteem has attracted the attention of many scholars in psychology and education and many studies have been conducted to show the contribution of this characteristic to the learning of different subject matters including the learning, studies found that self-esteem affects academic performance (Koosha, Ketabi, and Kassaian 2011). Clinicians have attempted to provide interventions based on existing models of care, such as cognitive-behavioural therapy (CBT), CBT targets both maladaptive thoughts and problematic behaviours (Waite, McManus, and Shafran 2012). Strengths-based approaches deploy the inherent strengths of clients to aid recovery and cultivate a sense of empowerment in terms of their own lives and self-esteem. The intervention group activities were included with their own development of strengths and identifying their weakness and improving the weakness effectively, rather than fixing thoughts on weakness. (Marrero et al. 2016)

Beck's cognitive model of self-esteem postulated that three basic concepts underlie self-perception: 1) the cognitive triad, (Jung-Chen Chang and A 1996) the cognitive triad consists of the individual's negative view of self, negative view of the world, and negative view of the future. Schemas are the cognitive patterns that an individual employs to interpret a particular set of situations. Learned helplessness refers to the cluster of deficits in emotional reactions, (Perveen et al. 2018) motivation, and learning that occur when individuals believe they have no control over the negative or traumatic events in their environment. Negative concepts about self the external world and the future are formed through early life experiences. Individuals can manifest low self-esteem when latent negative schemas are activated by certain events or situations which trigger the negative automatic thoughts of about themselves. (Arhin and Amoako 2019). Self-Affirmations are proven methods of self-improvement because of their ability to rewire our brains. Much like exercise, they raise the level of feel-good hormones and push our brains to form new clusters of "positive thought" (Valiente et al. 2019). The intervention session based on self-affirmation revealed positive outcome in building self-esteem among university students. Mindfulness has been defined as a moment-to-moment awareness of one's experience without judgment. This means being present in the moment, with a feeling of acceptance. Increasing one's mindfulness (Mon, Liabsuetrakul, and Htut 2016) can result in reduced negative self-talk, improved concentration, and a number of interpersonal benefits. Like any skill, becoming more mindful takes practice.

Cognitive-behavioural therapy is based on the interrelationship of thoughts, actions, and feelings. In order to work with feelings and thoughts (Montreuil et al. 2016) towards specific goal and activities, certain activities were implemented, which revealed significant increase in task oriented behaviour especially toward academic achievement. Daily activities to enhance the self-perception, (Bowles 2017) the goal directed activities directly impact on feeling and self-esteem throughout. Self-concept refers to the collection of personal thoughts by which an individual describes or characterizes the self (Marrero et al. 2016). To rephrase the thoughts and concept in positive dimension helped the students to enhance self-esteem and focused towards academic behavior, which leads significant increase in their self-esteem and academic achievement. Many intervention exposed positive outcome in the direction of cognitive change and focused behavior (Priyamvada et al. 2009). Current study results are good indicator for student's performance enhancement by enhancing their self-esteem.

5. Conclusions

In conclusion, the group interventions to enhance self-esteem were effective, there was significant increase in self-esteem score and academic achievement among students. During education the students need specific tailored intervention to sustain their self-esteem and over all mental health. This study has implication for education setting, therapeutic setting and individual behaviour management among students. Study revealed that there is link between self-esteem and good academic performance among students.

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