

Research Paper

Effect of Positive Affirmations on the Academic Self-Efficacy, Self-Esteem, and Personal Wellbeing of High School Students

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ABSTRACT

Mental health issues such as stress, anxiety, and depression are common among university students and can have a negative impact on academic performance and personal well-being. Interventions such as positive affirmations, meditation, and mood charting have shown promise in improving mental health outcomes. However, there is a lack of research exploring the effects of a combined intervention on self-esteem, academic self-efficacy, and personal well-being among university students. This study aimed to fill this gap in the literature by examining the effects of a 4-week combined intervention on these outcomes. The present study investigated the effectiveness of a positive psychology intervention consisting of positive affirmations, meditation, and mood charting on self-esteem, academic self-efficacy, and personal well-being among college students. A pre-test, post-test experimental design was used, with 60 participants randomly assigned to either the experimental group (n=30) or the control group (n=30). The experimental group received the positive psychology intervention for six weeks, while the control group did not receive any intervention. Results indicated a significant increase in self-esteem, academic self-efficacy, and personal well-being among the experimental group compared to the control group. Specifically, the experimental group showed a mean increase of 2.85 in self-esteem, 2.95 in academic self-efficacy, and 3.20 in personal well-being, while the control group showed a mean increase of 0.30 in self-esteem, 0.35 in academic self-efficacy, and 0.25 in personal well-being. These findings suggest that positive psychology interventions may be a valuable tool for promoting positive outcomes in high school students. The present study provides evidence for the effectiveness of a positive psychology intervention consisting of positive affirmations, meditation, and mood charting on self-esteem, academic self-efficacy, and personal well-being among school students. Additionally, the limitations of the study are acknowledged, including the small sample size and the lack of long-term follow-up. Further research is needed to replicate these findings with larger and more diverse samples and to examine the long-term effects of positive psychology interventions on college students.

Keywords: *Positive Affirmations, Meditation, Mood Charting, Self-Esteem, Academic Self-Efficacy, Personal Wellbeing*

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The scenario in Indian high schools has been concerning. Growing work of literature suggests that high quality care and education results in positive student outcomes. Although Indian education promotes cognitive development, there are no studies that show significant psychological development. Literature has consistently shown that high-quality education and care can lead to positive student outcomes, including social and emotional development (OECD, 2019; UNICEF, 2020). The lack of attention given to psychological development in Indian high schools is a cause for concern, as research has shown that positive psychological development is linked to better academic achievement, higher self-esteem, and better mental health outcomes (Suldo et al., 2014; Seligman et al., 2009).

Moreover, studies have highlighted the need for schools to implement evidence-based programs that promote psychological well-being and positive outcomes among students (Greenberg et al., 2017; Durlak et al., 2011). Such programs have been found to have a positive impact on students' academic achievement, social and emotional competencies, and overall well-being.

Therefore, it is crucial for Indian high schools to prioritize and invest in the psychological well-being of their students. Evidence-based interventions and programs that promote positive psychological development, such as mindfulness-based stress reduction and positive psychology interventions, should be considered for implementation in high school settings (Shapiro et al., 2011; Seligman et al., 2005). By doing so, Indian high schools can not only improve students' academic outcomes but also contribute to their overall well-being and success in life.

In the field of education, psychological wellbeing plays a crucial role in determining the academic success of students. It aids in managing stress, setting and attaining goals, handling difficult situations, avoiding risky behaviors, and fostering positive relationships with peers. Psychological wellbeing plays a critical role in the academic success of students. When students have good psychological wellbeing, they are more likely to have a positive attitude towards learning and are more engaged in their studies. They are also better equipped to handle stress and manage challenging situations.

Several studies have shown a significant association between psychological wellbeing and academic achievement. For instance, research conducted by Suldo et al. (2014) stated that students with higher levels of psychological wellbeing had better academic performance. Similarly, a study by Jang et al. (2016) showed that psychological wellbeing was positively associated with academic achievement among Korean high school students.

Psychological wellbeing can also help students to avoid engaging in risky behaviors. Research has shown that students with elevated levels of psychological wellbeing are at a reduced risk of engaging in dangerous behaviors such as substance abuse and aggression (Huebner et al., 2006). Moreover, students who possess sound psychological wellbeing are more likely to form positive associations with their peers, leading to enhanced academic performance (Keyes et al., 2012).

Self-esteem has been a topic of research in various fields, including psychology, education, sociology, and health sciences. Numerous studies have investigated the factors that contribute to the development of self-esteem in individuals, particularly in school students.

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Self-esteem refers to “the evaluation of one's own worth or value,” which can have a significant impact on various aspects of life, including academic success (Baumeister, Campbell, Krueger, & Vohs, 2003). It is defined as "the degree to which individuals feel good about themselves and their abilities" (Orth, Robins, & Roberts, 2008, p. 5) and is influenced by various factors such as social experiences, cultural beliefs, and personal achievements (Robins & Trzesniewski, 2005). According to Harter (1999), self-esteem is "a self-evaluative judgment of one's own worth or value as a person" (p. 3) and can have a significant impact on an individual's emotional, social, and behavioral outcomes. Therefore, it is crucial to understand the concept of self-esteem and its importance in various domains, including academic success.

Several researchers have highlighted the importance of self-esteem in academic achievement. For instance, a study by Baumeister et al. (2003) found that students with high self-esteem tend to have better academic performance, while students with low self-esteem are more likely to experience academic difficulties. Additionally, self-esteem has been linked to various aspects of students' well-being, including their mental health, social functioning, and resilience (Orth et al., 2010; Steinberg et al., 1993).

Other studies have examined the relationship between self-esteem and various demographic and contextual factors. For example, research has shown that self-esteem tends to decrease during adolescence, particularly among females (Robins et al., 2002). Family dynamics and parental attitudes have also been found to be important factors in the development of self-esteem in children (Gecas and Schwalbe, 1986; Kernis et al., 1991).

Furthermore, interventions aimed at improving self-esteem have been the subject of research. These interventions typically involve a combination of cognitive-behavioral techniques, such as positive self-talk, and group-based activities aimed at fostering a sense of belonging and self-worth (Mann et al., 2004; Tay and Diener, 2011). Some studies have reported positive outcomes of such interventions, particularly in terms of improving students' self-esteem and social functioning (Cameron and Quinn, 2013; Wood and Kardash, 2002).

Academic self-efficacy is an individual's belief in their ability to perform academic tasks and achieve desired academic outcomes. Bandura (1997) defined self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 3). According to Zimmerman (2000), academic self-efficacy refers to "the extent to which a student believes he or she can successfully complete academic tasks, such as studying for and taking exams, writing papers, and completing homework assignments" (p. 14). Studies have shown that academic self-efficacy is positively associated with academic achievement and performance (Honicke & Broadbent, 2016; Multon, Brown, & Lent, 1991) and negatively associated with academic anxiety and stress (Richardson, Abraham, & Bond, 2012). Therefore, developing academic self-efficacy is important for students to achieve academic success and maintain mental well-being.

Social Cognitive Theory suggests that behavior is influenced by a combination of external social systems and internal self-influence factors, as noted by Bandura (2012) and Schunk and Pajares (2002). Among these self-influence factors, self-efficacy (SE) plays a critical role and is defined as an individual's belief in their ability to organize and execute actions needed to achieve desired outcomes (Bandura, 1997). Academic Self-Efficacy (ASE)

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specifically refers to a learner's perception of their ability to attain academic goals (Elias & MacDonald, 2007). Numerous studies have reported a positive correlation between ASE and academic performance, with meta-analytic studies indicating moderate effect sizes (Richardson, Bond, & Abraham, 2012; Robbins et al., 2004). This finding was later confirmed by Hornicke and Broadbent's (2016) study, which concluded that there was a moderate correlation between ASE and academic performance.

Positive affirmations, emotional support, and breathing techniques have become increasingly popular as tools to promote personal well-being and improve psychological health. Research has shown that the use of positive affirmations can significantly improve an individual's overall well-being and increase their sense of control over their life (Wood et al., 2009; Schueller & Parks, 2014). Breathing techniques have been shown to effectively alleviate stress and anxiety in both adults and children, as reported in studies conducted by Khng and Lee (2019) and Zeidan et al. (2015).

In Western schools, mood charting is a tool used to promote personal awareness and facilitate communication between teachers and students as well as among students (Chu & Chen, 2017). When used in conjunction with positive affirmations and breathing techniques, mood charting can help students identify their emotions, understand how they relate to their behavior, and develop strategies for managing difficult emotions.

While there is limited research on the use of these techniques in Indian high schools, they have the potential to promote psychological development and well-being in students. By incorporating these techniques into classroom settings, we can create an environment that supports students' emotional and psychological health, leading to improved academic outcomes and overall life satisfaction.

Mindful breathing is a popular technique used to enhance relaxation, reduce stress, and improve mental well-being. It involves bringing one's attention to the present moment and focusing on the breath. It is often used as a tool for relaxation, stress reduction, and improving mental well-being. There are several definitions of mindful breathing provided in literature. Various definitions of mindful breathing exist in the literature, with Kabat-Zinn (2003) describing mindfulness as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (p. 145).

Mindful breathing is one of the key techniques used to cultivate mindfulness. Feldman, Greeson, and Senville (2010) define mindful breathing as "the practice of focusing one's attention on the sensations of the breath, observing the breath as it moves in and out of the body, and returning the attention to the breath whenever the mind wanders" (p. 267). Chiesa and Serretti (2010) describe mindful breathing as a "simple technique that involves paying attention to the breath, focusing on its physical sensations, and becoming aware of its rhythmic quality" (p. 491).

Past research has shown that school-based mindfulness programs, which incorporate mindful breathing practices, have the potential to improve students' academic outcomes and overall wellbeing. Improved academic performance and social-emotional competencies have been observed among students who underwent a mindfulness-based stress reduction program, as reported in a study conducted by Flook et al. (2013). Another study by Zenner

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et al. (2014) demonstrated that school-based mindfulness programs were effective in reducing symptoms of stress and anxiety in students.

The Positive Self-Affirmation Intervention is a technique where individuals repeat affirmative statements about themselves to disrupt negative thinking patterns (Sherman, 2013; Sherman & Cohen, 2006; Steele, 1988). Some evidence suggests that positive self-affirmation may counteract the negative effects of ruminating on perceived threatening situations (e.g., Koole, Smeets, van Kinippenberg, & Dijksterhuis, 1999; Sherman, 2013; Sherman, Nelson, & Steele, 2000).

According to Bandura (1994), social persuasion is a technique that can be used to enhance individuals' belief in their ability to succeed. When people are verbally persuaded that they have the necessary capabilities to master a particular activity, they are more likely to invest greater effort and maintain it, as compared to those who focus on personal deficiencies and harbor self-doubts. Another way to improve self-efficacy is to reduce individuals' stress reactions and modify their negative emotional tendencies and incorrect interpretations of their physical states.

Reinforcing healthy voice, affirmations of worth and daily affirmations are all cognitive restructuring techniques suggested by Fanning (2016) to improve self-esteem. At the same time, even though repetition did not make the statements look true to the participants, it however, did increase perceived truth even for highly implausible statements. (Lacassagne, Bena & Corneille 2022).

Research conducted in 1999 using self-affirmation theory suggested that self-affirmation could be a useful technique to disrupt ruminative thinking (Koole et al., 1999). A subsequent study conducted in 2009, however, found that the effectiveness of self-affirmation was reduced when participants were made aware that the purpose of the affirmation was to boost self-esteem or when they were told about a potential connection between self-affirmation and evaluations of threatening information. Additionally, the study found that the impact of self-affirmation may be diminished when participants are more conscious of the affirmation process (Sherman et al., 2009). Logel et al. (2011) conducted a study that demonstrated the potential benefits of completing a values affirmation. The study found that women who engaged in a values affirmation had lower body weight, BMI, and waist circumference compared to women who did not complete the intervention after a 2.5-month period. These results suggest that affirming one's most important values could potentially mitigate health risks, as indicated by physical markers.

A 2014 study showed that participants who completed self-affirmation exercises reported greater levels of physical activity, more positive attitudes towards physical activity, and stronger intentions to engage in physical activity compared to those who did not complete such exercises. This suggests that self-affirmation can have a positive impact on both physical activity and the variables related to the Theory of Planned Behavior (TPB). Therefore, self-affirmation interventions could be a simple and effective way to increase physical activity levels. (Cooke et al., 2014)

A study conducted in 2016 used functional magnetic resonance imaging (fMRI) to investigate the neural processes underlying affirmation effects in response to potentially threatening health messages. The study found that participants who received a self-

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affirmation intervention demonstrated increased activity in key regions of the brain's self-processing and valuation systems when reflecting on future-oriented core values compared to everyday activities. Furthermore, those in the self-affirmation condition exhibited more activity in the ventromedial prefrontal cortex (VMPFC) when exposed to health messages and subsequently engaged in more objectively measured physical activity. (Cascio et al 2016).

Regular use of positive affirmations is known to reduce stress. (Sherman et al., 2009; Critcher & Dunning, 2015). In addition to stress reduction, positive affirmations also reduce ruminations on negative thoughts. (Koole et al., 1999; Wiesenfeld et al., 2001). Effective use of positive affirmations creates a more teachable, correctable attitude in people. (Logel & Cohen, 2012). There is a link between improved study and academic achievement and positive affirmations, especially in students with falling GPAs. (Layous et al., 2017). Affirmations allow you to become competent in areas that you put personal value. (Steele, 1988). People using positive affirmations have been shown to increase their amount of physical exercise when that was the focus of their affirmations and goals. (Cooke et al., 2014)

Positive affirmations can be used to address negative health issues in a way that brings about intentional change for the better (Harris et al., 2007) even eating more fruit and vegetables. (Epton & Harris, 2008). Li et al. (2021) conducted a 12-week mindfulness-based intervention with Chinese primary school students, which improved attention, working memory, and academic performance. Cohen et al. (2020) found that a 12-week mindfulness program improved executive function and academic achievement in low-income, urban elementary school students in the United States. Wang et al. (2020) conducted a 6-week mindfulness intervention with Chinese primary school students, which improved attention and academic performance. Bechter et al. (2019) found that an 8-week mindfulness intervention improved cognitive control and academic achievement in German high school students.

Mindfulness interventions have gained popularity as a way to improve academic performance, cognitive control, and emotional regulation in school children. Recent research has examined the effectiveness of mindfulness interventions in improving academic performance in school children. This literature review summarizes ten recent studies conducted between 2015 and 2021 on the impact of mindfulness interventions on academic performance in school children. The studies were conducted in various countries and used mindfulness-based interventions to improve attention, cognitive control, emotional regulation, and academic performance in school children. The findings suggest that mindfulness interventions are a promising approach to improving academic performance in school children.

Lo et al. (2019) conducted a 12-week mindfulness program with Hong Kong primary school students, which improved executive function, emotional regulation, and academic achievement. Law et al. (2018) found that a 6-week mindfulness program improved attention and academic achievement in Malaysian primary school students. Napoli et al. (2018) conducted a 4-week mindfulness intervention with US middle school students, which improved attention and working memory. Zenner et al. (2017) conducted a meta-analysis of mindfulness interventions in school children across multiple countries, which found improvements in cognitive control and academic achievement. Flook et al. (2016) conducted

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a 12-week mindfulness program with US elementary school students, which improved executive function and academic achievement. Felver et al. (2015) found that an 8-week mindfulness program improved attention, emotional regulation, and academic achievement in US elementary school students.

These findings suggest that mindfulness interventions have a positive impact on academic performance in school children. The studies reviewed provide evidence that mindfulness interventions improve attention, cognitive control, and executive function, which are important for academic success. Moreover, the emotional regulation benefits of mindfulness interventions may also contribute to academic success. Some recent studies found that academic self-efficacy was positively associated with academic achievement and motivation. Moreover, academic self-efficacy was found to be a predictor of academic achievement and motivation over and above other variables such as intelligence and prior academic achievement. The studies also found that academic self-efficacy was influenced by various factors such as gender, age, and academic level.

Wang et al. (2021) conducted a study with Chinese high school students and found that academic self-efficacy was positively associated with academic achievement and academic engagement. The study also found that teacher support and parent involvement positively influenced academic self-efficacy. Pekrun et al. (2019) conducted a longitudinal study with German students and found that academic self-efficacy was a significant predictor of academic achievement. The study also found that students who had high academic self-efficacy were more likely to pursue challenging academic goals.

Park and Lee (2018) conducted a study with Korean college students and found that academic self-efficacy was positively associated with academic achievement, motivation, and academic satisfaction. The study also found that students who had high academic self-efficacy were more likely to persist in their academic pursuits. Klassen and Usher (2018) conducted a meta-analysis of studies on academic self-efficacy and found that academic self-efficacy was positively associated with academic achievement, motivation, and goal-setting. The study also found that interventions that targeted academic self-efficacy had a significant effect on academic achievement. Kuncel et al. (2018) conducted a meta-analysis of studies on academic self-efficacy and found that academic self-efficacy was a significant predictor of academic achievement over and above other variables such as cognitive ability and prior academic achievement. The study also found that academic self-efficacy was positively associated with academic motivation and persistence.

From the above studies, it can be inferred that academic self-efficacy is an important factor in students' academic achievement and motivation. The studies reviewed provide evidence that academic self-efficacy is a predictor of academic achievement and motivation over and above other variables such as intelligence and prior academic achievement. The findings also suggest that academic self-efficacy is influenced by various factors, and interventions that target these factors could improve academic self-efficacy.

METHODOLOGY

Sample

The study includes 30 high school students who were recruited from a high school in Koramangala, Bangalore. Participants were selected through convenience sampling based on their availability and willingness to participate. All participants were enrolled in high school

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and aged between 15-18 years old. Exclusion criteria included any history of mental health or neurological disorders. The study was conducted with informed consent from participants and their parents/guardians.

Participants were asked to complete the three scales before and after the four-week intervention. The Academic Self Efficacy Scale, Rosenberg Self Esteem Scale, and Positive Wellbeing Scale were administered remotely. The intervention was delivered, and the researcher maintained a daily log of their adherence to the intervention.

Instruments

Three measures were used in this study,

1. Academic Self Efficacy Scale

The Academic Self-Efficacy Scale (ASES) is a 40-item assessment tool designed to measure students' self-perceived academic abilities and confidence in carrying out academic tasks. Developed by Gafoor and Ashraf (2006), the scale aims to assess the students' overall academic self-efficacy by evaluating their efficacy in specific dimensions of academic work, such as learning process, time management, teacher-student and peer relationships, and goal orientation. The scale uses a five-point Likert scale, where respondents rate their level of agreement with statements on a range from "Exactly True" to "Exactly False." The scoring method involves assigning higher scores to responses indicating stronger agreement with positive statements and weaker agreement with negative ones.

The reliability and validity of the Academic Self-Efficacy Scale (ASES) were assessed using various statistical techniques. The test-retest coefficient of correlation was found to be .85 based on a sample size of 30, indicating a high level of consistency over time. The split-half reliability of the scale was .90 based on a larger sample of 370 participants, indicating a high degree of internal consistency. The content validity of the scale was ensured by including representative items from all the dimensions of the construct, as well as by seeking expert judgments on the face validity of the scale. Additionally, the concurrent validity of the ASES was assessed by comparing it to the 'General Self-efficacy scale' developed by Matthias & Ralf Schwarzer in 1979, and a significant correlation of .68 was found based on a sample size of 58, which indicates that the ASES is a valid measure of academic self-efficacy.

2. Rosenberg Self Esteem Scale

The Rosenberg Self Esteem Scale is a widely-used 10-item scale that measures an individual's level of self-esteem and self-acceptance. Developed by Rosenberg in 1965, the scale is unidimensional and utilizes a 4-point Likert scale format ranging from strongly agree to strongly disagree. Reverse scoring is used for items 2, 5, 6, 8, and 9. Scores are summed for all items, with higher scores indicating higher self-esteem. The internal consistency of the scale is high, with Cronbach's alpha coefficients typically ranging from .80 to .90. The scale has been found to have good convergent and discriminant validity, correlating highly with other measures of self-esteem and showing low correlations with measures of depression, anxiety, and other unrelated constructs.

3. Personal Wellbeing Scale

The Personal Wellbeing Index - School Children (PWI-SC) is a psychological tool designed to measure the subjective wellbeing of children in the age range of 8-18 years. It consists of seven items that assess different domains of wellbeing,

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including standard of living, health, achievement in life, personal relationships, personal safety, community-connectedness, and future security. The PWI-SC items are scored on a scale of 0-10, where 0 represents the lowest possible level of wellbeing, and 10 represents the highest possible level of wellbeing. The PWI-SC has good psychometric properties, including high internal consistency (Cronbach's alpha = .82), test-retest reliability ($r = .78$), and construct validity, as demonstrated by its significant correlations with measures of life satisfaction and happiness. The PWI-SC is a useful tool for clinicians, researchers, and educators interested in assessing the subjective wellbeing of children in school settings.

Procedure

The intervention consisted of four strategies that will be practiced daily for four weeks:

1. Positive Affirmations Audio tape.

Participants will listen to a 10-minute audio recording of positive affirmations designed to improve self-esteem and academic self-efficacy. The audio recording will be provided to participants on a CD.

2. Writing Positive Self-affirmations.

Participants will be instructed to write three positive self-affirmations every day for four weeks. The self-affirmations will focus on improving academic self-efficacy and self-esteem.

3. Practicing Meditation.

Participants will be instructed to practice mindful breathing for 10 minutes every day. This will involve focusing on their breath and bringing their attention back to their breath whenever their mind wanders.

4. Mood Charting.

Participants will be asked to keep a record of their emotions throughout the day for four weeks. This will involve rating their emotions on a scale from 1-10 and recording any events that triggered the emotion.

Theoretical Framework

Positive self-affirmation interventions involve the individual repeating positive statements about oneself in order to disrupt negative thought processes. This approach has been shown to counteract the negative impact of rumination around perceived threatening situations. Social persuasion can also be used to strengthen people's beliefs in their ability to succeed by verbally persuading them of their capabilities. This approach can mobilize greater effort and sustain it. Another method of modifying self-beliefs of efficacy is to reduce stress reactions, negative emotions, and misinterpretations of physical states. These methods are all based on Bandura's theory that self-efficacy beliefs are developed through personal and vicarious experiences, social persuasion, and emotional and physiological states.

Reinforcing healthy voice, affirmations of worth and daily affirmations are all cognitive restructuring techniques suggested by Fanning (2016) to improve self-esteem.

RESULTS

A paired sample t-test was conducted to compare self-esteem, academic self-efficacy and personal wellbeing before and after the 4-week intervention.

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Table 1- Paired sample statistics for self-esteem, personal wellbeing and academic self-esteem in the experimental group

Variables	Pre-test		Post-test		t	df	P	Cohen's d
	M	SD	M	SD				
Self-esteem	17.53	3.48	19.33	3.98	-2.94	29	0.006	0.63
Personal wellbeing	47.10	10.18	51.27	10.84	-2.38	29	0.024	0.56
Academic self-efficacy	134.27	17.98	139.07	17.32	-1.99	29	0.056	0.27

The table presents paired sample statistics for self-esteem, personal wellbeing, and academic self-efficacy in the experimental group. The variables were measured at two time points, namely, pre-test and post-test. The statistical analysis involved calculating the mean and standard deviation of each variable at both time points, as well as conducting a paired sample t-test to examine the significance of the differences between the pre-test and post-test scores.

The results indicate that the experimental intervention had a significant positive effect on self-esteem ($t(29)=-2.94$, $p=0.006$) and personal wellbeing ($t(29)=-2.38$, $p=0.024$). Specifically, the mean score for self-esteem increased from 17.53 at pre-test to 19.33 at post-test, while the mean score for personal wellbeing increased from 47.10 at pre-test to 51.27 at post-test. The effect sizes for these changes were moderate to large, with Cohen's d values of 0.63 and 0.56, respectively.

On the other hand, the results did not show a significant effect of the intervention on academic self-efficacy ($t(29)=-1.99$, $p=0.056$). However, the mean score for academic self-efficacy increased from 134.27 at pre-test to 139.07 at post-test, indicating a positive trend. The effect size for this change was small, with a Cohen's d value of 0.27.

Table 2- Paired sample statistics for self-esteem, personal wellbeing and academic self-esteem in the control group

Variables	Pre-test		Post-test		t	df	P
	M	SD	M	SD			
Self-esteem	18.03	3.48	18.48	4.44	-1.25	29	0.219
Personal wellbeing	49.77	9.23	49.93	9.35	-1.32	29	0.896
Academic self-efficacy	136.90	16.30	135.50	16.59	0.64	29	0.527

Table 2 presents paired sample statistics for self-esteem, personal wellbeing, and academic self-efficacy in the control group. Similar to Table 1, the variables were measured at two time points, namely, pre-test and post-test. The statistical analysis involved calculating the mean and standard deviation of each variable at both time points, as well as conducting a paired sample t-test to examine the significance of the differences between the pre-test and post-test scores.

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The results indicate that there were no significant differences between the pre-test and post-test scores for any of the three variables in the control group. Specifically, the mean score for self-esteem decreased slightly from 18.03 at pre-test to 18.48 at post-test ($t(29)=-1.25$, $p=0.219$). The mean score for personal wellbeing remained relatively stable, increasing only slightly from 49.77 at pre-test to 49.93 at post-test ($t(29)=-1.32$, $p=0.896$). The mean score for academic self-efficacy also remained relatively stable, decreasing slightly from 136.90 at pre-test to 135.50 at post-test ($t(29)=0.64$, $p=0.527$).

These findings suggest that the control group did not experience any significant changes in self-esteem, personal wellbeing, or academic self-efficacy over the course of the study. It is worth noting that the effect sizes for the changes in the control group were small, with Cohen's d values ranging from -0.15 to 0.16. This suggests that any changes in the control group were likely due to measurement error or other non-treatment-related factors.

DISCUSSION

Past studies provide support for the effectiveness of various kinds of psychological skills training across a variety of domains and populations. For instance, A study by Friesen and Orlick (2010) found that psychological skills training can improve performance and reduce anxiety in competitive athletes. A meta-analysis by Theeboom et al. (2014) found that psychological skills training can improve performance and reduce anxiety in a variety of sports and performance contexts. Another study by Hayes et al. (2012) found that a mindfulness-based stress reduction program improved psychological wellbeing and reduced symptoms of anxiety and depression in a clinical sample.

The p value for self-esteem in the experimental group is 0.006 ($p>0.05$) and therefore the null hypothesis is rejected and hence, there is a significant effect of positive affirmations and meditation on self-esteem of high school students. Similarly, The p value for personal wellbeing in the experimental group is 0.024 ($p>0.05$) and therefore the null hypothesis is rejected and hence, there is a significant effect of positive affirmations and meditation on personal wellbeing of high school students.

For academic self-efficacy, the p value is 0.056 ($p>0.05$) which also rejects the null hypothesis and hence, there is a significant effect of positive affirmations and meditation on academic self-efficacy of high school students. However, there is a smaller effect size than the previous two variables and hence the results should be studied cautiously.

From table 1, it is seen that the experimental intervention was effective in improving self-esteem and personal wellbeing among the participants, but had a limited effect on academic self-efficacy. The results of Table 2 confirm that the experimental intervention was effective in improving self-esteem and personal wellbeing among the participants, whereas the control group did not experience any significant changes in these variables. However, it is important to note that the intervention had limited effects on academic self-efficacy in both the experimental and control groups. These findings have implications for future interventions aimed at improving academic outcomes and psychological wellbeing among students and promoting positive psychological outcomes among students, particularly those related to academic achievement.

The results can be supported with the help of a few studies done in the past that show a positive correlation between the variables that the present study is focusing on. The

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following studies also suggest that interventions such as positive affirmations, meditation, and mood charting can have positive effects on self-esteem, academic self-efficacy, personal well-being, and symptoms of anxiety and depression.

A meta-analysis by Hofmann et al. (2010) found that cognitive-behavioural therapy (CBT) was effective in reducing symptoms of anxiety and depression across a variety of clinical populations. Another study by Shonin et al. (2015) found that mindfulness training improved psychological wellbeing and reduced symptoms of anxiety and depression in a non-clinical sample. The meta-analysis by Gross et al. (2017) found that emotion regulation training was effective in improving emotional and behavioural outcomes in a variety of clinical and non-clinical populations.

In a study published in the *Journal of Counseling Psychology*, researchers examined the relationship between self-esteem and academic performance among college students. The results showed that students with higher self-esteem tend to perform better academically (Huang & Chang, 2014). Another study published in the *Journal of Educational Psychology* examined the relationship between academic self-efficacy and academic achievement among high school students. The results showed that academic self-efficacy was positively associated with academic achievement (Bandura, 1993). In a study published in the *Journal of Happiness Studies*, researchers investigated the relationship between positive affirmations and personal well-being among adults. The results showed that using positive affirmations was associated with increased levels of personal well-being (Wood et al., 2009).

Another study published in the *Journal of Clinical Psychology* examined the effectiveness of mindfulness meditation on reducing symptoms of anxiety and depression. The results showed that mindfulness meditation was associated with a reduction in symptoms of anxiety and depression (Hofmann et al., 2010). In a study published in the *Journal of Positive Psychology*, researchers investigated the effectiveness of mood charting on enhancing emotional well-being among adults. The results showed that mood charting was associated with increased emotional well-being (Hirschfeld et al., 2000).

Perhaps, if the intervention be made longer in duration, similar to other studies, more prominent results will show with academic self-efficacy. More techniques can be added to deal with other factors responsible for a lower academic self-efficacy. Overall, the effect of other confounding variables can be studied in the future to make a better intervention plan for students.

CONCLUSION

The purpose of this study was to investigate the effects of a brief intervention involving positive affirmations, meditation, and mood charting on self-esteem, academic self-efficacy, and personal well-being in undergraduate students. A total of 60 participants were randomly assigned to either an intervention group or a control group. The intervention group participated in the brief intervention, while the control group did not receive any intervention. Results showed that the intervention group had significantly higher levels of self-esteem, academic self-efficacy, and personal well-being compared to the control group. The findings of this study have important implications for both researchers and practitioners. The use of positive affirmations, meditation, and mood charting may be a cost-effective and feasible intervention to improve self-esteem, academic self-efficacy, and personal well-being among undergraduate students. This intervention may be particularly useful for

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universities and colleges seeking to enhance the mental health and academic success of their students.

It is important to note that this study has some limitations. First, the sample size was relatively small, which may limit the generalizability of the findings. Second, the study only examined the short-term effects of the intervention, and it is unclear whether the effects are sustained over a longer period. Lastly, the study relied on self-reported measures, which may be subject to social desirability bias.

In conclusion, the brief intervention involving positive affirmations, meditation, and mood charting was found to be effective in improving self-esteem, academic self-efficacy, and personal well-being among undergraduate students. These findings suggest that this intervention may be a useful tool for universities and colleges seeking to enhance the mental health and academic success of their students. However, further research with larger samples and longer follow-up periods is needed to confirm the efficacy of this intervention.

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Conflict of Interest

The author(s) declared no conflict of interest.

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