Policy Research Journal
ISSN (E): 3006-7030 ISSN (P): 3006-7022 Volume 4, Issue 6, 2026

IMPACT OF POSITIVE THINKING IN STRESS MANAGEMENT FOR MENTAL HEALTH OF TEACHER BS EDUCATION STUDENTS AT UNIVERSITY OF GUJRAT

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DOI: https://doi.org/10.5281/zenodo.20840753

Keywords
Positive Thinking, Stress Management, Mental Health, BS Education, Teacher Education, University of Gujrat, Psychological Wellbeing, Cognitive Reframing, Pakistan, Higher Education.

Article History
Received: 24 April 2026
Accepted: 06 June 2026
Published: 21 June 2026

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Abstract

Students studying teacher education at BS Education programs at Pakistani state universities must experience a unique set of academic, professional, and personal stressors, which in combination endanger their mental health and future performance as future educators. Combinations of both the pedagogical content knowledge and at the same time acquiring professional teaching skills under conditions of great classroom size, high-stakes test, practicum anxiety, financial constrainedness and family demands all amounts to chronic exposure to stress, which the literature on mental health issues is consistent in implicating as exposure to burnout, anxiety disorders, depression and cognitive impairment. Positive thinking - defined as a cognitive-affective bias, that comprises positive appraisal to stressful events, positive self-statements, positive future perspectives and the ability to reframe adversity as an opportunity - has been theorised and empirically researched as a buffer of the impact of stress on psychological wellbeing. Although there is a positive evidence internationally, the correlation between positive thinking, stress management, and mental health of BS Education students in Pakistan has not been empirically investigated. The article comprises a quantitative, descriptive-correlational study analyzing the effects of positive thinking on the management of stress, mental well-being of BS Education students at the University of Gujrat, Punjab, Pakistan. Three instruments are used to survey a stratified random sample of 150 students (n = 75 male, n = 75 female) based on the sample of the first four years of study, that is, Year 1-4, to use: the Positive Thinking Scale (PTS), the Perceived Stress Scale (PSS-10), and the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS). Pearson correlation, multiple linear regression analysis, and independent samples t-test can be considered as statistical analysis, and they were performed in the IBM SPSS Version 28.0. Results indicate that positive thinking has a significant negative relationship with perceived stress ($r = -0.61$, $p < .001$) and a significant positive relationship with mental wellbeing ($r = +0.67$, $p < .001$). The proportion of positive thinking in explaining variation in stress management capacity and mental wellbeing scores is 44 and 52 percent. The paper ends with evidence-based

suggestions that could be given in form of research findings to university counsellors, faculty and the BS Education curriculum committee to help incorporating the positive thinking skills in the pre-service teacher education model at the University of Gujrat.

1. INTRODUCTION

The pre-service teachers mental health is something of a grave educational implication. It has been established that future teachers who join the workforce with outstanding stress, anxiety and psychological burden are less effective during their first years of work, more likely to develop burnout in their career during the first five years of work, and more apt to pass the stress-related behavioral patterns to their students (Kyriacou, 2011; Jennings and Greenberg, 2009). The development of psychologically strong, emotionally controlled, and mentally fit teachers is thus not only a welfare issue to the teacher education learner as a human being, but a long-term investment in the education system which generations to come of Pakistani school children will get.

In Pakistani public higher education, students of BS Education, such as at the University of Gujrat, have a structurally challenging role in the education system. In contrast to students with single-subject undergraduate degrees, BS Education students have to shoulder the cognitive load of multi-subject academic coursework, the career-building imperatives of pedagogical orientation, performance pressures of a teacher practices practicum, and the existential pressures of preparing to work in a profession that is at once high stakes, socially interrogated, and often underpaid in the Pakistani public sector (Ahmad and Rauf, 2019; HEC, 2023). This profile of multi-layered stressors significantly puts BS Education students at quantitatively high risk of experiencing stress-related psychological challenges relative to students on other undergraduate programs - a risk that currently stands as ill-mitigated by the provisions offered by the university as a supportive environment.

Positive thinking, conceived in the psychological theory as a purposeful thinking choice that places a premium on positive, optimistic evaluation of circumstances, experiences, as well as individual abilities, aids in providing theoretically and empirically sound and supported preventive strategy against the psychological effects of everlasting stress. The initial research in positive psychology conducted by Seligman (2002) has proven that those who consistently use positive explanatory styles, that is, attributing negative events to transient, localized, and external factors as opposed to enduring, pervasive, and internal ones, exhibit much better stress coping skills, greater resiliency, less depression rates, and better academic and professional functioning. Follow-up studies have continued to record that positive thinking, operationalized by a series of related constructs, such as dispositional optimism (Scheier and Carver, 1985), hope (Snyder, 2002), positive reappraisal (Garnefski and Kraaij, 2007) and psychological capital (Luthans et al., 2007) is an antecedent of perceived stress reduction and enhanced mental health outcomes among educational, clinical, and workforces.

No systematic investigation on whether the levels of positive thinking among BS Education students determine their ability to deal with academic and professional stress, and whether such relationship can have any quantifiable implications into their psychological wellbeing, has been conducted at the University of Gujrat. This paper seals that gap by testing validated positive thinking, perceived stress, and mental wellbeing measures on a representative sample of BS Education students as well as providing the interpretation of the associations between these constructs through adequate statistical rigour to provide actionable and evidence-based advice on the educational psychology support infrastructure of the university.

2. Research Objectives

The aim of this study is as follows:

- Objective: To evaluate positive thinking levels, perceived stress, and mental wellbeing of BS Education students at the University of Gujrat.

- To test the connection between positive thinking and perceived stress among the BS Education students.
- Purpose: To explore the connection between positive thinking and mental wellbeing in BS Education students.
- To find out how far positive thinking is predictive of the stress management ability of BS Education students.
- To find out how much positive thinking predicts mental wellbeing in BS Education students.
- Possible hypotheses: There are no significant differences in levels of positive thinking, perceived stress, and mental wellbeing among male and female BS Education students at the University of Gujrat.
- To lead to evidence-based recommendations to incorporate the development of positive thinking skills in the BS Education curriculum, and student support services at the University of Gujrat.

3. Research Questions

Primary Research Question

- RQ1: What is the stress management and mental health purpose of positive thinking among BS Education students at the University of Gujrat, Pakistan?

Subsidiary Research Questions

- RQ2: What are the measures of positive thinking, perceived stress and mental wellbeing of BS Education students in the University of Gujrat?
- RQ3: Does positive thinking have a statistically significant association with perceived stress in BS Education students?
- RQ4: Does the relationship between positive thinking and mental wellbeing in BS Education students have a statistically significant relationship with each other?
- RQ5: Which is the extent of predicting stress management ability of BS Education students using positive thinking?
- RQ6: How positive thinking is related to scores of mental wellbeing in BS Education students?
- RQ7: Are there significant differences in positive thinking, perceived stress and mental wellbeing among male and female BS Education students at the University of Gujrat??

4. Significance of the Study

This research is important because of its articulated essence in terms of three complementary dimensions.

This study theoretically offers contributions to the application and contextual validation of positive psychology theory in the form of Seligman (2002) PERMA model of optimism, Scheier and Carver (1986) dispositional optimism model and Lazarus and Folkman (1984) transaction model of stress as it applies to the Pakistani BS Education context. These models are highly tested within Western psychology research but they have hardly been used on the example of the particular stressor profile of pre-service teacher education learners in a South Asian state university. By exploring the correlations between positive thinking, perceived stress, and mental wellbeing, the study will determine the cross-cultural generalisability of the cognitive-positive psychological theory and determine whether any adjustments to the situation were needed to apply the theory to Pakistan higher education.

The study empirically addresses a definite and provable gap that exists in the Pakistani educational psychology literature. Although stress and mental health among Pakistani university students has also been a focus of medical, engineering and social science research, BS Education students, though possessing a unique dual stressor experience of being undergraduate students and future pre-service teachers, have been virtually free of empirical investigation. The research methodological rigour of the current participant quality of evidence through the use of valid measures and sound psychometric measures, stratified random sampling and multivariate regression analysis can inform the policy of curriculum and design of student support to be provided in the University of Gujrat to similar institutions.

In practice, findings of the study would furnish directly actionable evidence base to the programme reform by the Department of

Education at the University of Gujrat, student counselling services, and BS Education programme committee. Individually when positive thinking is shown to be a key predictor of stress management as well as mental wellbeing, the university has an ethical reason to include in the BS Education curriculum the skills training of positive psychology: cognitive reframing, optimism development, hopeful thinking skill, and positive self-talk, as a quantifiable aspect of teacher pre-service education of psychological resilience development as opposed to depending on serendipity or even personality.

5. Problem Statement

The type of stress profile of BS Education students in the University of Gujrat is unique and especially used to both the academic requirements of the undergraduate degree program and a further set of psychological issues related to teacher preparation: anxiety of teaching practicum, anxiety or of being viewed negatively by their colleagues, mastering the curriculum in several subjects simultaneously, family and social expectations regarding the teaching career, and the existential burden of the professional identity in the conditions of institutional scrutiny (Ahmad and Rauf, 2019; Kyriacou, 2011). Consistently reported, informal data of faculty advisors, counselling staff and student focus groups at the University of Gujrat suggest that large portions of BS Education students are chronically stressing, anxious and their psychological health is dropping, especially around practicum placement and examination times.

The backup of the mental health care system accessible to BS Education students at the University of Gujrat, just like at similar Pakistani state universities, is insufficient: counselling is understaffed compared to the size of the student body, psychologically aware content is mainly absent in the BS Education curriculum, and the faculty are generally untrained in detecting or treating student mental distress. Here, the fact that building the internal psychological resources of studentspositive thinkingbeing a high-impact, low-cost stress management and wellbeing protection strategy is an alternative to high-impact infrastructure-intensive clinical support models is of relevance.

The particular research question that is covered by this research is: whether positive thinking is a substantive predictor of managing stress and mental health among BS Education students at the university of gujrat. In the absence of such evidence, any institutional decision to implement positive thinking skills training as an aspect in the BS Education programme will be a question of pedagogical speculation, rather than evidence, policy. The current study brings that evidence by conducting a stringent correlational study to prove the relationship between positive thinking, stress and wellbeing in the target population.

6. Literature Review

6.1 Positive Thinking: Conceptual Foundations

Positive thinking is a multi-dimensional cognitive-affective concept that has been theorised and operationalised in a variety of overlapping traditions in psychological science. The positive psychological movement by Seligman and Csikszentmihalyi (2000) made the scientific study of positive subjective experience, positive personality and positive institution as a valid and requisite complement to the historical emphasis on pathology and maladaptation in psychology. In this context, positive thinking may be construed as dispositional optimism (Scheier and Carver, 1985) -the generalised belief that good things will happen to us than bad things - hope (Snyder, 2002) -the cognitive process of agency thinking and pathways thinking that leads us to prefer goals that we value - positive reappraisal (Garnefski and Kraaij, 2007) -the active reconstructions of stressful experiences in positive terms and -self efficacy (Bandura, 1986)- the belief in our ability to undertake the action necessary when it comes to dealing efficiently with challenges that arise.

The Psychological Capital (PsyCap) framework by Luthans, Youssef, and Avolio (2007) has most significantly influenced the operationalisation of positive thinking in educational psychology by treating four positive cognitive resources (hope, efficacy, resilience, and optimism) first as a higher-order construct with proven predictive validity of academic performance, stress management, and

psychological wellbeing in both the student and teacher populations globally.

6.2 Stress in PD students of teacher education.

Teacher education stress is a phenomenon well documented having both coincident antecedents and consequences irrespective of specific international studies. According to Kyriacou (2011) the most common stressors that pre-service teachers experience include: classroom management anxiety in practicum, workload and time pressure, evaluation anxiety, uncertainties about professional competence, interpersonal conflict with cooperating teachers, and the gap between idealised notions of teaching and practicum reality. There are further contextual stressors in Pakistan: the practicum schools are under-resourced, the university supervisors are not as helpful as they could be, the importance of the examination culture over in-depth professional knowledge, financial pressures of the student lifecycle, and the social pressure to achieve success in a profession that carries a high status burden (Ahmad and Rauf, 2019; Naz and Mahmood, 2020).

The most frequently tested scale of perceived stress among the undergraduate population of studies across the globe is the Perceived Stress Scale (PSS) developed by Cohen, Kamarck, and Mermelstein (1983) which has established reliability and validity across samples of South Asian students (Ramachandiran and Dhanapal, 2018). The fact that it can be used in the current study to make a direct comparison between the stress levels of University of Gujrat BS Education students and the reference norms found in similar groups of students.

6.3 Mental Health and Wellbeing among College Students.

The issue of mental health among university students has become a worldwide matter of concern in health care. According to the World Health Organization (2022), on average, 35% of university students all across the world are diagnosed with depression and anxiety disorders, whereas in low- and middle-income nations, the disease prevalence is much higher. In Pakistan, Studies on the psychology of the Pakistani population have shown that psychological distress among university students is widespread and is not well contained: According to Mirza and Jenkins (2004) such a level of 34 percent of university students in Lahore are meeting the criteria of common mental disorder, and more recent surveys of the population by the HEC show critical low uptake of student mental services due to stigma, service availability and awareness.

Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; Tennant et al., 2007) is a validated, positively-framed measure of mental wellbeing - including hedonic (positive affect, life satisfaction) and eudaimonic (purpose, personal growth, positive relationships) - that has been validated in application in South Asian populations (Stewart-Brown et al., 2009) and is especially suitable in the context of educational research in which the objective is not to avoid disorder but to promote positive mental health.

6.4 Connection of Positive Thinking to Stress and Mental Health.

A meta-analytic observation has continually shown strong negative relationships between the constructs of positive thinking and the perceived stress, as well as positive relationships between positive thinking and mental wellbeing. Alarcon, Bowling and Khazon (2013) carried out a meta-analysis of 83 studies and discovered a mean correlation of r = -0.42 optimism and psychological distress, and r = +0.55 optimism and psychological wellbeing. In a study conducted by Luthans et al. (2007), PsyCap training was found to greatly decrease perceived stress and enhance wellbeing among student groups and among employee groups. Yue, Le and Hiranandani (2014) identified a mediating role of positive thinking in the association between pre-service teachers in China, with stressors at work and burnout, and Duckworth et al. (2007) provided evidence that psychological capital was a predictor of stress resistance and mental health outcomes in educational transitions.

Bashir and Afzal (2018) in Pakistan found that optimistic thinking style has significant negative

relationships with perceived academic stress (undergraduate students at a Lahore university), whereas Khalid and Ashraf (2020) observed significant positive relationships between positive thinking intervention that lasted a few minutes and promoted improvements in mental wellbeing scores in BS Psychology students at Islamabad. No similar research on a BS Education setting, at one of the Punjab state universities has ever been employed, which characterizes the empirical void that the given study will fill.

6.5 Cognitive-Behavioral and Positive Psychology Interventions.

The evidence base upon which positive thinking constructs can be translated into teachable, trainable skills that can be incorporated into educational programmes is cognitive-behavioral therapy (CBT), and positive psychology interventions (PPIs). CBT strategies such as cognitive restructuring (identification and challenge of negative automatic thoughts), behavioral activation (enroll in activity important to them to break the Circles of avoidance), and stress inoculation training (exposure to stress with adaptive coping rehearsal gradual exposure) have been shown to be effective in reducing stress and enhancing wellbeing in university student samples (Firth et al., 2017). Randomised controlled trials of PPI such as Best Possible Self exercise, three good things journaling, gratitude practice, and strength identification have achieved significant gains in optimism and wellbeing (Seligman et al., 2005; Sin and Lyubomirsky, 2009). A combination of these streams of evidence leads to endorsement of the possibility of a curriculum based positive thinking development programme to BS Education students, in the University of Gujrat.

6.6 Theoretical Framework

The paper is theoretically based on three frameworks that are complementary to each other. The fundamental rationale of the stress-appraisal is Lazarus and Folkman (1984) Transactional Model of Stress and Coping: stress is seen as a consequence of the personal evaluation of the situation as a threat and the subsequent evaluation of the personal ability to effectively manage it as inadequate: a two-step procedure of the dual appraisal with the theorisation of positive attitude toward changing the primary appraisal (into a benign instead of threatening one) and secondary appraisal (into an increased confidence over coping ability). The wellbeing rationale unique to Seligman (2002) Positive Psychology Framework places the positive thinking as a predictor and part of the psychological flourishing that BS Education students need to be effective professionals. The Social Cognitive Theory (SCT) developed by Bandura (1986) offers the self-efficacy mechanism, whereby, positive thinking is speculated to boost academic and professional self-efficacy to mediate the outcome between positive cognitive orientation and real stress management and wellbeing outcomes..

7. Research Methodology

7.1 Research Design

In this research, a quantitative, descriptive-correlational research design is used. The reason behind choosing the design is that the main objective of the research is the description of the levels of positive thinking, stress, and mental wellbeing that currently exist in the sample of students of BS Education, as well as to analyze the directional and predictive correlations of these constructs - goals that can be suitably achieved with the help of the correlational analysis of the survey data instead of the manipulation of the variables (Creswell and Creswell, 2018; Cohen et al., 2018). The cross-sectional survey-based approach is suitable since there is no prior baseline information on this population and the necessity to demonstrate the presence and strength of the relationship between positive thinking and stress on wellbeing and establish intervention studies should be designed and assessed.

7.2 Conceptual Framework

Positive thinking is the independent variable and it is operationalised using the Positive Thinking Scale (PTS). Perceived stress, which was operationalised based on the Perceived Stress Scale (PSS-10), and mental wellbeing, which was operationalised based on the Warwick-Edinburgh

Mental Wellbeing Scale (WEMWBS) are the dependent variables. The control variables are gender (male/female) and year of study (Year 1 through Year 4) to will partially correct their effects on outcome variability in regression models.

Table 1: Conceptual Framework – Variable Structure

Variable Type	Variable	Instrument / Measure
Independent Variable	Positive Thinking	Positive Thinking Scale (PTS) — 20 items, 5-point Likert
Dependent Variable 1	Perceived Stress	Perceived Stress Scale (PSS-10) — 10 items
Dependent Variable 2	Mental Wellbeing	Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) — 14 items
Control Variables	Gender, Year of Study	Male/Female; Year 1 / Year 2 / Year 3 / Year 4

8. Data Collection

8.1 Population and Sample

The target group is the entire set of the undergraduate students (Year 1, Year 2, Year 3, and Year 4) of the programme BS Education programme in the University of Gujrat - a population size of about 620 learners in 4 years of studies. Stratified random sample size of n = 150 students is selected, stratified by gender (75 male, 75 female) and representativeness of year of study proportionately, across all the four years of cohort study. The adequate sample size is justified by various factors: (1) Gpower analysis of multiple regression with five predictors, medium size of effect (f 2 0.15), alpha of.05, and 80% power give n 150 which is just under the minimum of 84; (2) n 150 of 150 corresponds to a 95 per cent confidence interval with a margin of error of about + 6.5 which is close to 80 per cent power with a moderate size of effect of 0.15; and (3) with a population of 620, n 150 will give a 95 per cent confidence interval with a margin of error of about + 6.5 and this is just below the 80 per cent power with medium size effects of 0.15.

8.2 Research Instruments

Instrument 1: Positive Thinking Scale (PTS)

A 20-item Likert-scale measure (1 = Strongly Disagree to 5 = Strongly Agree) of five dimensions of positive thinking developed by the researcher based on 4 items each: (1) Optimistic Future Orientation: belief that positive events are likely and that difficulties are temporary; (2) Constructive Self-Talk: the use of encouraging, affirming internal dialogue in the presence of adversity; (3) Cognitive Reframing: the tendency to redefine setbacks and stressors as chances to learn and develop; (4) Hopeful Goal Thinking: belief that there is a pathway to the desired academic and career goals; and (5) Gratitude and Positive Affect: the tendency to find positive things in everyday life. The PTS is based on tested and proven positive thinking tools and psychological capital measures, with items tailored to the BS Education experience of the student community at the University of Gujrat.

Instrument 2: Perceived Stress Scale - 10 item version (PSS-10)

The most popular and relevant popularly validated measure of perceived psychological stress is the PSS-10 (Cohen, Kamarck, and Mermelstein, 1983), which present the level at which situations in the lives of respondents are rated on the basis of unpredictability, uncontrollability, and overwhelm. All the items have a 5-point scale (0 = Never to 4 = Very Often) and the total scores are used to indicate a higher perceived stress. There are a large number of cross-cultural validation studies that confirmed PSS-10 reliability and validity in South Asian college students (Ramachandiran and Dhanapal, 2018), which means that it is directly applicable to the present study population.

Instrument 3: Warwick -Edinburgh Mental Wellbeing Scale (WEMWBS).

WEMWBS (Tennant et al., 2007) is a tool comprising of 14 items that assess the following positive aspects of mental health, such as positive affect, psychological functioning, and satisfying interpersonal relationships. The items will be rated in a 5-point Likert scale (1 = None of the time to 5 = All of the time), with the large numbers meaning a high degree of mental wellbeing. WEMWBS has demonstrated that it can be used in university student populations in various countries such as Pakistan with high levels of psychometric properties (Cronbachs 0.87 to 0.91 on average).

8.3 Data Collection Procedure

The data are gathered in a structured researcher-administered process in three stages to obtain the survey data. In Phase 1 (Week 1), stratified random sampling of the sample of BS Education students in the University of Gujrat is done through a random number generator with the element of replacement sampling so as to give way to non-consent. All participants agree to informed consent, and are fully informed about the purpose of the study, their voluntary participation, the anonymity of their responses, and that there will be no academic repercussions to participation or not participating. Phase 2 (Weeks 23): The mixed-method survey tool of PTS, PSS-10, and WEMWBS is given on paper during designated study sessions in the presence of a research assistant to answer any questions regarding items without tampering with research. The mean time of completion comes out to about 20 minutes. During Phase 3 (Week 4), completed surveys are coded, performed on SPSS, and data entry accuracy is controlled by performing 10% random validation of original paper forms.

9. Reliability and Validity

9.1 Content Validity

The researcher-adapted Positive Thinking Scale (PTS) has content validity that also can be confirmed through a panel review by six experts in the field, two educational psychologists, two positive psychology experts and two senior BS Education faculty members. The Content Validity Index is used to compare each of the items with a domain specification matrix (I-CVI 0.78 per item; s-cvi/ave 0.90 on a scale-wide level) (Polit and Beck, 2006). Items that do not pass the I-CVI test are changed with the help of the panel then pilot tested. Since both the PSS-10 and the WEMWBS are internationally-validated scales with long histories of published psychometric methods, they do not need additional content validation other than testing item comprehensibility in the University of Gujrat student sample.

9.2 Construct Validity

PTS DSS construct validity is assessed by utilizing Exploratory Factor Analysis (EFA) based on the pilot sample data (n = 35 BS Education students not used in the actual study). The first rotation is principal axis factorPromax that assumes Kaiser-Meyer-Olkin (KMO) 0.7 or more, signficant Bartletts Test of Sphericity ($p < .001$), and the hypothesised five-factor structure with each item loading of 0.40 or higher on reminiscent factor. Convergent validity is determined by looking at the correlations of PTS domain scores with well-known positive psychology scales (optimism subscale of the Life Orientation Test-Revised, LOT-R).

9.3 Reliability

Internal consistency of all three instruments is assessed using Cronbach's alpha in the pilot sample (n = 35). Target reliability thresholds: PTS full scale $\alpha \geq 0.85$; PTS sub-scales $\alpha \geq 0.70$; PSS-10 $\alpha \geq 0.75$ (consistent with published norms of 0.78–0.91); WEMWBS $\alpha \geq 0.85$ (consistent with published norms of 0.87–0.91). Test-retest reliability over a two-week interval is targeted at ICC ≥ 0.75 for all instruments.

Table 2: Target Reliability Coefficients by Instrument and Scale

Instrument	Scale / Sub-scale	Target Cronbach's α	Target ICC
PTS	Full 20-item Scale	≥ 0.85	≥ 0.75
PTS	Optimistic Future Orientation	≥ 0.70	≥ 0.75
PTS	Constructive Self-Talk	≥ 0.70	≥ 0.75
PTS	Cognitive Reframing	≥ 0.70	≥ 0.75
PTS	Hopeful Goal Thinking	≥ 0.70	≥ 0.75
PTS	Gratitude & Positive Affect	≥ 0.70	≥ 0.75
PSS-10	Full 10-item Scale	≥ 0.75	≥ 0.75
WEMWBS	**Full 14-item Scale**	**≥ 0.85**	**≥ 0.80**

10. Data Analysis

All statistical tools are done on IBM SPSS Statistics Version 28.0. The sequence of analysis then used is the following:

- The descriptive statistics (mean, standard deviation, frequency distributions, percentile rank) are calculated of PTS total and domain scores, PSS-10 total scores, and WEMWBS total scores across the full sample and gender and sub-group by year of study.
- Normality Testing: Tests of normalcy (Shapiro-Wilk tests and use of Q-Q plots) are used on all continuous outcome variables. The values of skewness and kurtosis are analyzed, and those exceeding/under +/-2 are indicators of non-parametric options (Spearman, rho, Mann-Whitney U).
- Pearson Product-Moment Correlation: To determine the bivariate associations between PTS total and domain scores with (a) PSS-10 total scores and (b) WEMWBS total scores, describing the direction, the magnitude and the statistical significance of each association.
- Simple Linear Regression: To identify what percentage of variance in PSS-10 and WEMWBS score is independently predicted by PTS total score, it would be necessary to determine the overall predictive ability of positive thinking of each outcome.
- Multiple Linear Regression: To determine which PTS domain (Optimistic Future Orientation, Constructive Self-Talk, Cognitive Reframing, Hopeful Goal Thinking, Gratitude and Positive Affect) is the strongest independent predictor of (a) perceived stress and (b) mental wellbeing when all five domains are entered simultaneously, controlling for gender and year of study.
- Independent-Samples t-Test (Gender): To compare the results of PTS, PSS-10 and WEMWBS between male students and female students of BS Education, to test gender distinct stress and wellbeing patterns.
- One-Way ANOVA (Year of Study): To compare the PTS, PSS-10, and WEMWBS scores of Year 1, 2, 3 and 4, with Tukey post-hoc Comparisons in case of significant main effects.
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11. Findings

Results are reported in a logical order of descriptive sample traits to the bivariate correlations to multivariate regressions.

11.1 Demographic Profile of the Sample

Table 3: Demographic Profile of Sample (n = 150)

Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	75	50.0%
	Female	75	50.0%
Year of Study	Year 1	40	26.7%
	Year 2	38	25.3%
	Year 3	38	25.3%
	Year 4	34	22.7%
Residential Status	Day Scholar	98	65.3%
	Hostel Resident	52	34.7%

11.2 Descriptive Statistics: PTS, PSS-10, and WEMWBS

Table 4: Descriptive Statistics for PTS, PSS-10, and WEMWBS (n = 150)

Scale	Min	Max	Mean	SD	Possible Range	Interpretation
PTS — Positive Thinking (Total)	38	96	**67.4**	11.8	20–100	Moderate
PSS-10 — Perceived Stress (Total)	4	36	**21.6**	6.4	0–40	Moderate-High
WEMWBS — Mental Wellbeing (Total)	22	66	**46.2**	9.3	14–70	Moderate

The mean of the perceived stress (M = 21.6, SD = 6.4) is moderate-vigorous in comparison with PSS-10 normative data in students overall (normative M = 1619 in students who are non-clinical); this implies that BS Education students at the University of Gujrat in perceived stress are above average when compared to international student reference populations. The scores of mean positive thinking (M = 67.4 of 100) and mental wellbeing (M = 46.2 of 70) are moderate and are in line with a population of moderate levels of psychological resources and psychological strain.

11.3 PTS Domain Scores

Table 5: PTS Domain Descriptive Statistics (n = 150)

PTS Domain	Mean	SD	Interpretation	Rank
Optimistic Future Orientation	14.8	3.1	Moderate-High	1st
Hopeful Goal Thinking	14.2	3.3	Moderate-High	2nd
Gratitude and Positive Affect	13.9	3.5	Moderate	3rd
Constructive Self-Talk	12.4	3.8	Moderate	4th
Cognitive Reframing	12.1	4.0	Moderate	5th

Positive resources of thinking BS Education students reported wereOptimistic Future Orientation (M = 14.8) and Hopeful Goal Thinking (M = 14.2), with Cognitive Reframing (M = 12.1) and Constructive Self-Talk (M = 12.4) being weakest - a pattern also found in the literature that reframing and self-talk are the most cognitively challenging positive thinking skills that require active practice and training in order to develop.

11.4 Correlation: Positive Thinking and Perceived Stress

Table 6: Pearson Correlations — PTS Domains with PSS-10 and WEMWBS

PTS Domain	r with PSS-10	p-value	r with WEMWBS	p-value
Optimistic Future Orientation	−0.54	< .001	+0.58	< .001
Constructive Self-Talk	−0.58	< .001	+0.61	< .001
Cognitive Reframing	−0.63	< .001	+0.65	< .001
Hopeful Goal Thinking	−0.49	< .001	+0.54	< .001
Gratitude & Positive Affect	−0.46	< .001	+0.52	< .001
Total PTS Score	**−0.61**	**< .001**	**+0.67**	**< .001**

p < .01 (two-tailed)

There is a significant negative relationship between total positive thinking (PTS), and perceived stress (r = -0.61, p = 0.001) and a significant positive relationship between mental wellbeing and total positive thinking (r = +0.67, p = 0.001). All the five areas of PTS are greatly and considerably connected with the two results. The best single correlate of lowered stress (r = -0.63) and improved wellbeing (r = +0.65) is Cognitive Reframing, which is directly consistent with the cognitive appraisal mechanism in the Lazarus and Folkman (1984) transactional model of stress.

11.5 Regression Analysis: Positive Thinking Predicting Stress and Wellbeing

Table 7: Multiple Regression — PTS Domains Predicting PSS-10 (Perceived Stress)

Predictor (PTS Domain)	B	SE B	β	t	p
Optimistic Future Orientation	−0.48	0.18	−0.19	−2.67	.009
Constructive Self-Talk	−0.61	0.16	−0.24	−3.81	< .001
Cognitive Reframing	−0.73	0.17	−0.31	−4.29	< .001
Hopeful Goal Thinking	−0.39	0.17	−0.15	−2.29	.024
Gratitude & Positive Affect	−0.35	0.16	−0.14	−2.19	.030

Model Summary (PSS-10 outcome): R = 0.66, R^2 = 0.44, Adjusted R^2 = 0.42, F(5, 144) = 22.56, p < .001

Table 8: Multiple Regression — PTS Domains Predicting WEMWBS (Mental Wellbeing)

Predictor (PTS Domain)	B	SE B	β	t	p
Optimistic Future Orientation	+0.92	0.26	+0.21	3.54	.001
Constructive Self-Talk	+1.08	0.24	+0.25	4.50	< .001
Cognitive Reframing	+1.24	0.25	+0.34	4.96	< .001
Hopeful Goal Thinking	+0.81	0.25	+0.19	3.24	.002
Gratitude & Positive Affect	+0.76	0.23	+0.17	3.30	.001

Model Summary (WEMWBS outcome): R = 0.72, R^2 = 0.52, Adjusted R^2 = 0.50, F(5, 144) = 30.98, p < .001

Positive thinking is used to explain 44% of the variance in perceived stress scores (R2 = 0.44) and 52% of the variance in the scores of mental wellbeing (R2 = 0.52). Cognitive Reframing predicts the two outcomes best, reduced stress (β = -0.31, p <.001), and better wellbeing (-0.34, p <.001) most accurately, which restricts the importance of cognitive appraisal processes in the positive thinking-mental health association, and supports the choice of Cognitive Reframing as the highest leverage target of skills-based positive thinking interventions.

11.6 Gender Comparison

Table 9: Independent-Samples t-Test — Gender Differences in PTS, PSS-10, and WEMWBS

Scale	Male M	Male SD	Female M	Female SD	t(148)	p / d
PTS — Positive Thinking	65.8	12.1	69.0	11.4	−1.79	.076 / d=0.27
PSS-10 — Perceived Stress	20.4	6.7	22.8	6.0	−2.44	.016 / d=0.37
WEMWBS — Mental Wellbeing	47.8	9.1	44.6	9.4	2.19	.030 / d=0.34

The BS Education women experienced a much higher level of perceived stress (M = 22.8 vs. 20.4, p = .016, d = 0.37) and lower level of mental wellbeing (M = 44.6 vs. 47.8, p =.030, d = 0.34) than the male students, whereas the difference of positive thinking was not significant (p =.076). These small-to-medium effect size gender differences are not surprising considering the overall gender and academic stress literature (Naz and Mahmood, 2020) and imply that the positive thinking interventions offered at the University of Gujrat can be best designed to reach their full potential in the case of female BS Education students.

12. Conclusion

This paper aimed to explore the effects of positive thinking on stress levels and mental health in BS Education students at the University of Gujrat, which is an exemplar of a population where the psychological wellbeing of its members directly affects the developmental trajectory of each individual, but the quality of education the schoolchildren would provide to future generations of Pakistani children as well. The results are clear and practically important, a positive thinking is a significant, statistically significant predictor of both lower perceived stress (r = -0.61; R 2 = 0.44) and higher levels of mental wellbeing (r = +0.67; R 2 = 0.52) in this population, and the sizes of these two effects are among the largest reported to date in the correlational study of psychological resource and student mental wellbeing.

The most theoretically significant finding of the study is recognizing that Cognitive Reframing itself is the strongest individual predictor of both the stress reduction (+ 0.31) and the wellbeing improvement (+ 0.34). Cognitive Reframing is the overt restatement of stressful situations in constructive terms, which occupies the cross-related positions of Lazarus and Folkman (1984) appraisal theory and Beck cognitive model, and its preeminence in the regression models confirms that it is not the generic sense of being able to think positively which serves to guard the mental health, but the specific ability to rethink negative academic and professional experiences as the learning and growth opportunity. It is an intervention able ability, and its recognition as the biggest lever of positive thought results under stress and wellbeing amongst BS Education students at the University of Gujrat offers specific, prescriptive advice to intervention design.

The result that female BS Education students have much higher perceived stress and lower mental wellbeing than their male peers, even though they share similar positive thinking scores, indicates that gender-sensitive stress mechanisms have effects on this group without reliance on cognitive psychological resources. It suggests that positive thinking interventions, however, needed, may not be able to bridge the gender wellbeing gap among BS Education students on their own, and that gender-specific structural supports, such as mentoring, safe social environments, representation in programme leadership, may be necessary as complementary interventions.

Combined, these results comprehensive affirm positive thinking as a changeable psychological resource with quantifiable protective value to the stress and mental well-being of BS Education students of the University of Gujrat, and affirm that Cognitive Reframing and Constructive Self-Talk are the most challenging skills training targets to integrate into the curriculum in this segment of the population.

13. Recommendations

13.1 For the BS Education Curriculum Committee

- Incorporate a separate Psychological Wellbeing/Positive Thinking course (at least 3 credit hours) into the BS Education curriculum, directly as a response to the five constructive skills at positive thinking that are found in this research: Optimistic Future Orientation, Constructive Self-Talk, Cognitive Reframing, Hopeful Goal Thinking, and Gratitude and Positive Affect. This module to be placed in Year 1 or Year 2 in order to have the greatest developmental influence prior to the years of stressful practicum.
- Integrate Cognitive Reframing exercises into the courses in teaching students stimulational and contemplative methods: to train this most impactful positive thinking skill in real-life teacher-

education settings, embedded reframing prompts need to be part and parcel of practicum debriefing sessions, reflective journals, and peer supervision groups.

- Introduce the Brief Positive Thinking Practices (BPTPs) five to ten-minute structured optimism, gratitude or strength practices as routine introduction to all BS Education lessons, normalizing the routine of positive cognitive practices during the four-year programme.

13.2 To University Counselling and Student Support Services.

- Develop and implement an organized, six-session Positive Thinking and Stress Management: Positive Group workshop programme, that takes place regularly (semester after semester) to all BS Education students, and specifically outreach to Year 3 and Year 4 students approaching practicum placement. The results of this study form the empirical basis of the hypothesis that the participants will have much lower levels of perceived stress and better outcomes of wellbeing.
- Develop gender-responsive counselling interventions to balance an objectively greater stress load among female students of BS Education: peer counselling by older female students, women-specific groups, and faculty advisory services with gender-specific stressor profiles have been suggested as add-ons to positive thinking skills training.

13.3 For University Faculty

- Model Cognitive Reframing in Action directly in classroom communication: in situations where an academic complication, practicum challenge, or examination complication are on the verge of being discussed in the classroom, faculty must out loud model constructive reappraisal - by expressing growth-oriented conceptualizations of problem - to enable students in BS Education to vicariously learn the reframing skill identified by this study to be most protective regarding stress and wellbeing.
- Introduce systematic, positive, strengths-based formative teaching practicum evaluation: feedback in which a teacher recognizes specific strengths and growth opportunities, as opposed to deficit only feedback, is helpful in facilitating the positive appraisal which this study shows are highly protective of perceived stress in the practicum setting.

13.4 For University Administration

- Commission a longitudinal follow-up follow-up Study 1. Track whether BS Education graduates exposed to positive thinking skills training during their programme show lower burnout rates, greater professional resilience, and has better student relationships in their first five years of teaching - quantifying long-term professional payoff of pre-service teacher positive psychology development.
- Students mental wellbeing monitoring - In the institutional risk assessment and review framework of student welfare at the University of Gujrat, incorporate the use of validated instruments like the WEMWBS and the PSS-10 (administered every year to all cohorts of BS Education students) into its institutional management systems that allow systematic student at-risk cohort identification and focused provision of positive thinking support resources.

13.5 For Future Researchers

- Carry out a randomised controlled trial (RCT) comparing the impact of a positive thinking skills training programme on perceived stress and mental wellbeing in BS Education students at the University of Gujrat as a continuation of the correlational relationships in this study to produce experimental evidence on the effects of interventions.
- Certain advantages of the proposed study are to investigate how academic self-efficacy mediates the positive thinking-stress-wellbeing relationship in BS Education students and test whether positive thinking lowers stress due to increased self-efficacy beliefs, or via direct cognitive appraisal mechanisms - which makes the point of study significant in intervention targets..

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