

Can the Western-Based Psychological Capital Intervention Improve Mental Health in the Indian context? A Pilot Study among Female College Students in Kerala

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ABSTRACT

With growing concerns about female mental health and inadequate services in India, there is a rising need for interventions to build women's psychological capabilities and increase well-being. PsyCap interventions (PCI) focusing on Hope, Efficacy, Resilience, and Optimism (HERO), have shown promise in the West, but remain under explored in India. This study is the first to assess the PCI approach among female undergraduate students in Kerala, India. The quasi-experimental study involved a one-sample pretest-post-test design. Thirty-six female undergraduate students underwent a two-day PCI. Within-group differences in PsyCap, PERMA, and Satisfaction with Life levels were measured pre-intervention and post-intervention. The findings revealed significant increases in PsyCap, Hope, Resilience, and Efficacy and Satisfaction with Life (Subjective Well-being). Optimism and PERMA (psychological well-being) showed no significant change from the pretest to the post-test. The results address the critical need for employing PCI as a non-specialist mental health intervention to build female students' psychological capabilities in academic settings.

Keywords: Psychological Capital, Satisfaction with Life, PsyCap intervention, PERMA, College women

Introduction

Psychological Capital (PsyCap) emerged from Positive Organizational Behavior and is defined as the study and application of positive human resource strengths and psychological capacities that can be measured, developed, and effectively managed to enhance performance. PsyCap is a higher-order construct with four key components: hope, optimism, resilience, and self-efficacy. These components are considered state-like and can be developed through specific interventions.¹

Hope - Snyder developed the construct of hope and defined it as a motivational state depending on a mix of successful agency and pathways.² Agency refers to the energy or single-minded focus on goals and pathways are the planning performed to reach the goals.

Efficacy – The 'efficacy' in PsyCap is grounded in the Social Learning Theory of Bandura³ who defined it as, "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances".

Resilience- Luthans⁴ defined resilience as, "the positive psychological capacity to rebound, or 'bounce back' from adversity, uncertainty, conflict, failure or even positive change, progress, and increased responsibility". Resilience is "the capacity to remain well, recover, or thrive in the face of adversity".⁵

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Optimism- Optimism is individuals' positive expectations about future events.⁶ Seligman (1990)⁷ defined optimism as an “attribution style that explains positive events through personal, permanent and pervasive causes and negative events through external, temporary, and situation-specific ones.”

Building Psychological Capital

Research on building PsyCap through structured interventions has found promising results in academic and organizational settings.⁸ Most of the studies on PsyCap interventions have been modelled on the framework developed by Luthans et al.¹ However modified PsyCap interventions based on positive psychology interventions have also yielded promising results⁹, like mindfulness training¹⁰; strengths intervention¹¹; traditional music education¹² Heart Math program and expressive writing exercises.¹³

While face-to-face interventions have dominated research on PCI delivery, other approaches including online/web-based; video; blended face-to-face and phone delivery approaches have also shown promise have yielded mixed results.¹⁴

PsyCap and Well-Being

The dynamics of PsyCap and well-being display a collage, and research indicates that PsyCap acts as a predictor of well-being and happiness. PsyCap is also seen as a mediating variable between well-being and outcomes such as stress, academic performance, mental health, and positive emotions.¹⁵ Nevertheless, the effectiveness of PCIs in improving well-being remains indefinite. This could be the effect of mixed results reported in intervention studies,¹⁶ and due to fewer PCI studies focusing on well-being as a secondary outcome. Additionally, several studies have operationalized well-being differently and focused on either Subjective Well Being (SWB) or Psychological Well Being (PWB). Consequently, this area warrants further research and exploration.

PsyCap in the Indian Context

Empirical studies on PCIs are predominantly conducted in regions like the USA, UK, and European countries, with limited research across Asian, African, and Australian contexts.¹⁶ In India, PsyCap research has mainly focused on self-report measures exploring correlations between PsyCap and outcomes like mental health, academic achievement, and stress.¹⁷ However, studies on the effectiveness of PCI among Indian college students are scarce. This highlights the need to establish the cross-cultural validity of PCI in India, considering cultural factors that may impact outcomes.

Why PsyCap Interventions May Matter for Indian Women

India, which ranks among the countries with the highest levels of gender inequality, sees women entrenched in gender biases that greatly elevate their susceptibility to prevalent mental health conditions. Due to unequal social conditions, traditional gender roles, domestic violence, lack of social support, and poverty, Indian women are more vulnerable to mental health conditions.¹⁸ According to the National Mental Health Survey of India (2015-16)¹⁹, suicidal behaviour is more prevalent among women than men²⁰, and this variation could be attributed to gender-specific vulnerabilities to psychopathology and psychosocial stressors. Bio-psychosocial factors such as stressful life events, added work and home responsibilities, care giving burdens, abuse, and poverty affect women's mental health. Societal pressure to conform to traditional gender roles, sexual abuse, domestic violence, early marriage, adverse childbirth experiences, depression due to hormonal fluctuations, and substance abuse, are some of the crucial factors of mental illness in India. Moreover, mental health challenges faced by Indian women are exacerbated by family and societal expectations, worsened by conflicts between personal desires and social norms. The most vulnerable are the underprivileged women belonging to lower socioeconomic status with low education and unstable family relationships.

Research points to the psychosocial and the socio-economic basis of mental health conditions among Indian women warranting a gender-specific perspective to deal with their unique psychological needs. Developing interventions to enhance women's psychological capacities can help mitigate external factors contributing to their mental health

challenges. College and university settings provide critical opportunities for personal growth, with studies showing significant mental health improvements through interventions in these environments.

Though evolved for an organizational setup, the Psychological Capital model may serve as a crucial framework for bolstering the mental health of women of all life stages. The present study seeks to assess the efficacy of an amended intervention program based on this model, customized to enhance the psychological capital of young college women. The hypothesis is that enhancing their psychological capital will young women to face life challenges with greater resilience.

Exacerbating Mental Health concerns among women in Kerala

Kerala State with its high SDI, faces significant mental health challenges due to rapid social and economic changes.²¹ The National Mental Health Survey (2015–16) reported a prevalence of mental disorders at 11.36% in Kerala, with a marked increase in issues across genders from 2002 to 2018.²² Common concerns include suicide, alcohol use, family breakdown, and academic stress. The Global Burden of Disease Survey (1990-2017) indicated higher rates of depression and anxiety, particularly among women in urban areas. Shifting family dynamics and persistent gender norms have hindered women's empowerment.²³ Kerala's suicide rate stands at 26.9%, higher than the national average, with marital issues and gender inequality contributing to female suicides.²⁰ Psychological distress is prevalent among female college students leading to academic underachievement and substance abuse.²⁴ Female college students face disproportionately high psychological distress leading to issues like academic failure, substance abuse, suicidality, and ADHD

The Current Study

To bridge the knowledge gap regarding the efficacy of the traditional PsyCap interventions, a PsyCap intervention was designed and administered to young college women in Kerala to test its feasibility and approach. The study also aimed to test whether a PCI can enhance hope, optimism, efficacy, and resilience, and lead to an increase in wellbeing among young female college students in Kerala.

Method

Participants: Ethical approval was obtained from the Institutional Ethics Committee and 49 female undergraduates from a women's college in Central Kerala were recruited. Traditional students transitioning to adulthood from adolescence and exploring their identity and academic strengths were considered for testing the PCI in this study. After pretest assessments, they attended a two-day PCI program. Data analysis included only those who participated in both days and completed pretest and post-test assessments, resulting in a final sample of 36 students. These participants, aged 19-21, were diverse in religious background (50% Christian, 33% Hindu, 17% Muslim) and geography (52.5% from Central Kerala, 22% from South Kerala, 5.5% from North Kerala, 19.4% raised in the Middle East). Most were single (89%) and heterosexual (81%). For experimental studies, it has been recommended to use a "single-blind" procedure whereby participants are not informed about the nature, purpose, or content of the treatment/intervention in advance to reduce the effects of demand characteristics. Keeping this in mind the participants were not given any advance information about the PCI or its purpose. There were two measurement time points as mentioned below:

- Pretest (T1) – Before the intervention
- Post-test (T2) – Immediately after the intervention

Study Design

A quasi-experimental approach was employed, involving a one-sample pretest-post-test design. As the pilot study aimed to test the feasibility of the designed PsyCap intervention, a control group was not chosen.

Measures

Compound Psychological Capital-12R (CPC 12R) Scale - The Compound Psychological Capital-12R (CPC 12R) Scale²⁵ was used to measure Psychological Capital during both time intervals, i.e., the pretest and post-test. The scale consists of 12 items that measure the constructs of Hope, Efficacy, Resilience, and Optimism. Split-half reliability using Cronbach's alpha coefficient at T1 was $\alpha = 0.80$ and T2 was $\alpha = 0.82$. The scale was found to have test-retest reliability with a strong positive significant coefficient ($r = 0.648, p = -0.000 < 0.05$).

Subjective Well-Being - Satisfaction with Life Scale (SWLS) - Subjective well-being is measured in terms of the cognitive aspect of life satisfaction. The cognitive component of life satisfaction is based on overall estimations of the quality of life and is not vulnerable to change owing to temporary emotional responses to situations. In this study, it is measured using the Satisfaction with Life Scale (SWLS) developed by Diener et al.²⁶ The scale consists of 5 items that measure overall satisfaction with life on a 7-point scale. Split-half reliability using Cronbach's alpha coefficient at T1 was $\alpha = 0.77$ and T2 was $\alpha = 0.86$. The scale was found to have test-retest reliability with a strong positive significant coefficient ($r = 0.698, p = 0.000, < 0.05$).

Psychological Well-being – PERMA Measure:

To measure psychological well-being PERMA measure was used.²⁷ The PERMA measures Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment along with Negative Emotions, Loneliness, and Health. The PERMA measure has 23 items with items for negative emotions, loneliness, health, and overall happiness acting as filler items. For analysis, the 15 items measuring PERMA (3 per domain) were used along with the 1 item measuring overall happiness to understand overall well-being. The items are rated on an 11-point scale ranging from 0-10. Split-half reliability using Cronbach's alpha coefficient at T1 was $\alpha = 0.93$ and T2 was $\alpha = 0.93$. The scale was found to have test-retest reliability with a strong positive significant coefficient ($r = 0.698, p = 0.000 < 0.05$).

The alpha coefficients obtained for the scales demonstrate strong internal consistency, indicating that the items within each scale are highly correlated and measure the same underlying construct. This suggests that the scales are reliable for assessing Satisfaction with Life, PERMA (Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment), and Psychological Capital both before and after the intervention or assessment period. The test-retest results indicate that the participants' scores on PsyCap, Satisfaction with Life and PERMA remain relatively stable when measured at two different time points. The significant p-values indicate that these correlations are unlikely to have occurred by chance, further supporting the test-retest reliability of the scales.

The PCI Program

The PCI program was developed based on the principles outlined by Luthans et al.¹ and existing PsyCap research. It was designed to cultivate the four core PsyCap components—Hope, Efficacy, Resilience, and Optimism. The training modules, reviewed by experts, incorporated specific activities aligned with these components:

Hope: Participants set personal and professional SMART goals (Specific, Measurable, Achievable, Relevant, Time-bound), refining them through the STEPPING process. They generated multiple pathways to achieve their goals and planned for obstacles, with discussions in pairs.

Efficacy: In paired discussions, participants reviewed their goals, sub-goals, and pathways, offering feedback to each other. They reflected on past successes, documenting how they achieved previous milestones.

Optimism: A guided visualization exercise had participants imagine their pathways, obstacles, and strategies for overcoming challenges, followed by writing down the positive emotions they felt while envisioning success.

Resilience: Small group discussions focused on identifying strengths, talents, support systems, and potential risks. Students discussed strategies to avoid risks and achieve their goals.

The PCI program was delivered as a two-day intervention, with each day featuring three hours of training through lectures, videos, self-reflection exercises, and small group discussions to create an engaging and comprehensive learning experience.

Results

The mean, standard deviation, minimum, and maximum scores for each dependent variable at the pretest (T1) and post-test (T2) are reported in **Table -1**. The Kolmogorov–Smirnov (KS) test result for PsyCap was significant, $p=0.03$, indicating that the data was not normally distributed. The KS test results for Hope ($p=0.012$) and Optimism ($p<0.001$) were significant at the 0.05 level, indicating a non-normal distribution. Conversely, the KS test results for Efficacy ($p=0.056$) and Resilience ($p=0.087$) were not significant, indicating normal distribution for these variables. The KS test results for the SWLS ($p=0.067$) and PERMA ($p = 0.2$) were not significant suggesting that the data was normally distributed. The KS results of PERMA components - Accomplishment ($p=0.006$) and Engagement ($p = 0.048$) were not normal while Positive Affect ($p = 0.158$), Meaning ($p = 0.095$) and Relationship ($p = 0.182$) test distributions are normal. Since the study design was a pretest-post-test intervention design, the data is paired, and therefore matched pairs tests were done for all the constructs. Wilcoxon test (one-tailed) was employed for non-parametric data.

Table-1: Descriptive Statistics at Pretest (T1) and Posttest (T2)

	Time	Mean	Median	SD	Min	Max
PsyCap	T1	49.83	51	9.05	25	67
	T2	55.08	56	7.76	33	71
Hope	T1	11.72	12	2.75	6	16
	T2	13.55	14	2.47	7	18
Efficacy	T1	12.92	13	2.48	7	18
	T2	14.03	14	2.04	8	18
Resilience	T1	11.97	12	2.83	6	18
	T2	13.28	13.5	3.31	3	18
Optimism	T1	13.22	13.5	3.33	3	18
	T2	14.22	14	2.24	8	18
SWL	T1	21.77	22	6.16	10	35
	T2	23.86	26	6.67	5	33
PERMA	T1	103.55	110.5	25.55	45	150
	T2	106.58	108.5	21.59	45	148
Positive Affect	T1	18.63	20	6.88	2	29
	T2	19.33	20	5.25	8	29
Engagement	T1	21.61	23	5.08	8	30
	T2	22.16	23	4.57	10	30
Relationship	T1	20.83	22	5.55	5	29
	T2	21.67	23	5.28	4	30
Meaning	T1	17.55	19.5	7.40	0	30
	T2	18.19	18.5	5.77	5	29
Accomplishment	T1	18.11	18	4.51	8	28
	T2	18.58	18	4.32	9	28
Overall Happiness	T1	6.80	7	2.53	0	10
	T2	6.63	7	2.19	0	10

In terms of the effectiveness of the PCI, significant increases were found in overall PsyCap ($W = 514$, $z = -3.71$, $p<0.001$) and its components of Hope ($W=364$, $z = -3.70$, $p< 0.001$), Efficacy ($t = -3.36$, $p= 0.002$), and Resilience ($t =-3.44$, $p=0.002$). The component of Optimism showed no change from the pretest to the post-test ($W =272$, $z=-1.596$, $p=0.055$). On the well-being measures Satisfaction with life increased significantly ($p = 0.008$), while PERMA ($p = 0.169$) and its components of accomplishment ($W = 231$, $z = -1.01$, $p = 0.156$),

Table -2: Wilcoxon Test Statistics at Pretest (T1) and Post-test (T2)

	<i>Std Test Statistic</i>	Asymp. Sig. (2-tailed)
Sum Hope (Post) - Sum Hope (Pretest)	-3.701 ^b	0.000
Sum Optimism (Post) -Sum Optimism (Pretest)	-1.596 ^b	0.110
Sum PsyCap (Post) -Sum PsyCap (Pretest)	-3.076 ^b	0.000
Sum Accomplishment (Post) -Sum Accomplishment (Pretest)	-1.012 ^b	0.311
Sum Engagement (Post) -Sum Engagement (Pretest)	-0.912 ^b	0.362
a..Based on Wilcoxon Signed Rank test b. Based on negative ranks		

Engagement ($W=312$, $z= -0.91$, $p=0.182$), Positive Affect ($p=0.146$), Meaning ($p=0.255$) and Relationship ($p=0.179$) showed no significant change post-intervention. Tables 2 and 3 summarize the statistical findings for each of the variables from T1 to T2.

Table -3: Paired Sample Results at Pretest (T1) and Posttest (T2)

	Paired Differences				t	df	Sig (2 tailed)
	Mean ± SD	Std. Error Mean	95% Confidence Interval of the Difference				
			Lower	Upper			
Efficacy T1 – T2	-1.11 ± 1.98	0.33	-1.78	-0.44	-3.36	35	0.002
Resilience T1 – T2	-1.30 ± 2.27	0.37	-2.07	-0.53	-3.43	35	0.002
SWL T1 – T2	-2.08 ± 5.01	0.83	-3.78	-3.88	-2.49	35	0.017
PERMA T1-T2	-3.02 ± 18.7	3.11	-9.35	3.29	-0.97	35	0.33
Positive Affect T1-T2	-0.69 ± 3.89	0.64	-2.01	0.62	-1.06	35	0.292
Meaning T1-T2	-0.64 ± 5.75	0.95	-2.58	1.30	-0.67	35	0.510
Relationship T1-T2	-0.83 ± 5.35	0.89	-2.64	0.97	-0.93	35	0.357

Discussion

This study evaluated the effectiveness of a PCI targeting young female college students in Kerala, India. The findings strengthen the currently available evidence that PsyCap components of Hope, Efficacy, Resilience, and Optimism interact to improve psychological skills.²⁸ Results indicate a statistically significant median increase of 6.7% in PsyCap from the pretest to the post-test, consistent with previous PCI research reporting changes between a 5.60% decrease and a 7.50% increase.²⁹ Although the effect size of this increase was small, it aligns with a meta-analysis by White et al.³⁰ that demonstrated small effect sizes for positive psychology interventions. Excluding Optimism, Hope, Efficacy, and Resilience showed significant increases post-intervention. This exclusion of optimism could be attributed to the goal-specific orientation of the intervention, which might not have sufficiently extended optimism to broader life outcomes. The method of "Best Possible Self" has been seen as effective in improving optimism and this could be effectively combined with PCIs.³¹

The present study held the hypothesis that PsyCap influences SWL which was evident as a small but significant increase post-intervention. This increase could be attributed to goal-setting exercises and group discussions that motivated participants to work towards their aspirations. These activities, which are driven by intrinsic motivation and frame experiences positively, are key contributors to subjective well-being. The PCI exercises likely facilitated these processes, enhancing participants' subjective well-being.

The results also need to be viewed with caution as SWL is subjective and related to evaluative wellbeing which considers the current circumstances of the individual in influencing life satisfaction levels. Changing family, social, and

financial pressures, coupled with peer relationships play a role in the changing nature of Satisfaction with Life. Therefore, the participants may have experienced an increased SWL while engaging in the intervention exercises. Long-term follow-up assessments of the effectiveness of PCIs in sustaining SWL are recommended. Additionally, the results of the study indicated no significant increase in the psychological well-being (PWB) aspect measured by PERMA or its components. Generally, the PCI studies that showed a stronger impact on wellbeing, focused solely on improving the secondary outcome, rather than on enhancing personal resources. Therefore, a PCI focusing only on personal resources would not be sufficient to increase psychological well-being. Therefore, along with the traditional PCI centered on goal orientation, activities recommended by the PERMA model such as expressing gratitude, Three Good Things, Your Best Time, and improving positive emotions with positive language, can be incorporated into the PCI design to help increase psychological well-being. Further research is warranted on a wider population to generalize the feasibility of a blended PCI.

The study had certain limitations which are addressed here. Participants were selected from a single college in one geographic region, which limits the generalize ability of the findings to other areas. Further research is necessary to validate these results across diverse locations. Another limitation is the potential for common method bias, as participants completed both pretest and post-test questionnaires within two days, possibly influencing PsyCap responses and introducing common method variance. Future studies should address this by incorporating a sufficient time lag between pretest and post-test measurements. Additionally, the study relied solely on quantitative assessments through standardized measures, lacking qualitative data that could have enriched the findings.

Practical Implications

India faces a significant shortage of mental health services for treatment and support. Mental health initiatives in higher education have been limited, mostly to elite institutions. Although Kerala's Department of Collegiate Education launched the statewide mental health program "Jeevani" in 2019-2020 for government colleges, its implementation was disrupted by the COVID-19 pandemic. Jeevani employs trained counsellors to address student mental health concerns and raise awareness. In 2023-24, Kerala extended the program to aided colleges, but students in private and self-financing colleges and deemed universities still lack access to these services.

With a shortage of mental health specialists in educational institutions, there is an increasing need to share mental health support responsibilities with trained non-specialists or para-counsellors. A carefully designed PCI could serve as a non-specialist intervention to enhance female students' psychological capabilities. Trainers, tutors, or coaches could integrate PCI into academic settings. Emerging research shows that PsyCap can be developed through brief interventions by trainers, whether in-person, online, or via web-based platforms. Incorporating 2–3-hour PsyCap sessions into the curriculum could benefit young women by helping them manage mental health, adapt to challenges, and improve their overall well-being and personal growth. To develop women with exceptional psychological and physical resilience, it is recommended that faculty, tutors, or coaches in higher education institutions be trained in PCI programs to help inoculate women from mental health disorders.

Conclusion

In conclusion, this study shows that a structured PCI can significantly enhance the PsyCap of female college students. PCIs provide a valuable framework for helping female students develop self-awareness, goal-setting skills, and career exploration strategies, which are essential for successful careers. By promoting an understanding of their strengths, interests, and values, PCIs empower students to make informed career decisions and pursue their aspirations with greater confidence. The study confirms the feasibility and acceptability of implementing PCI programs in college settings, as demonstrated by the successful application in a private college in Central Kerala. Furthermore, this research highlights the practical applicability of PCIs in higher education institutions within this region.

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