

Research Article

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Psychological Capital, Student-Student Relationship, and Well-Being in the Context of Higher Education

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Abstract

Background/purpose. This study adopted the self-determination theory to examine the influence of psychological capital (PsyCap) and student-student relationship (SSR) on psychological well-being (PWB) and whether SSR mediates the relationship between PsyCap and PWB in the context of higher education.

Materials/methods. A cross-sectional study was conducted with 200 undergraduate students from Delta State University, Nigeria. The participants comprised 51 (25.5%) males and 149 (74.5%) females with a mean age of 21 years (SD = 2.39). Data were collected using three instruments with good psychometric properties. The Harman single factor test was used to check for common-method bias in the data. A regression-based analysis supported by the PROCESS macro tool was utilized for testing the study's hypotheses using IBM-SPSS v25.

Results. The direct effect results indicated that PsyCap positively and significantly predicts SSR. Similarly, the direct effect statistics also indicated that PsyCap and SSR positively and significantly predict PWB. The mediation test confirmed that the relationship between PsyCap and PWB was mediated by SSR. Theoretical and empirical findings provided logical explanations for the results obtained.

Conclusion. The findings led to the conclusion that PsyCap and SSR are valuable mechanisms for improving students' PWB. The study recommends that university academics, administrators, and policymakers provide an environment that fosters positive relationships among peers, and a sense of competence, both of which are implicated in PsyCap and SSR.

1. Introduction

Psychological well-being (PWB) has become a topic of interest among scholars worldwide because of its roles in other crucial facets of life such as family (Ghazanfari et al., 2023), work (Edosomwan et al., 2023), and educational endeavors (Ayinde et al., 2021; Cobo-Rendón et al., 2020). In Nigerian universities, students' well-being is becoming a major issue of concern. This is greatly impacted by several personal and environmental factors both within and outside of the school system. Higher levels of PWB have been associated with factors that foster educational pursuits and help students attain their full potential. For instance, PWB has been associated with achieving personal goals, academic success, a meaningful life, and enhancing social connections (Agung et al., 2022; Baik et al., 2019; Brooker & Vu, 2020; Morales-Rodríguez et al., 2020). In contrast, an extended exposure to low PWB resulting from emotional and mental distress is linked with learning difficulties and course attrition (Brooker & Vu, 2020). PWB is frequently regarded as the result of a life well lived and is crucial for students' successful adaptation to the higher education environment (i.e., college or university). As a result, PWB usually includes dimensions such as purpose in life (believing that one has a purpose and meaning in life), self-acceptance (having a positive opinion about oneself and one's past life), autonomy (feeling of self-determination or independence), positive relations (having positive relationships with others), personal growth (feeling that one is still growing and developing as a person), and environmental mastery (being able to manage one's life and environment) (Morales-Rodríguez et al., 2020; Ryff & Keyes, 1995).

A person's subjective affirmation of their psychological states, such as pleasure, purpose, and life fulfillment, is referred to as PWB. Since its conception, empirical research has supported the concept of PWB. It is a complex construct that considers several aspects of an individual's mental and emotional well-being, such as fulfilling relationships, personal development, positive self-esteem and acceptance, and a feeling of mastery over one's life. In a nutshell, PWB is the ability to face obstacles head-on, feel good about oneself and one's life, and have fulfilling relationships and a sense of purpose. It is a complex concept that includes more than simply being free of mental illness; it also includes a person's general sense of fulfillment and contentment. Undergraduates are consistently faced with challenges in the school environment that can impede their well-being in the absence of support and coping strategies (Tavares-Almeida, 2023). With significant psychological distress levels relative to the general population, this period (expectations that come with higher education) is thought to be among the lifecycles most anxious and least in PWB. Several studies in the literature indicate that that university students reported reduced levels of PWB. According to the study conducted by Sandoval et al. (2017), a considerable proportion of university students exhibit a moderate level of PWB, implying that it is a measure of their level of adjustment and adaptation. Recent research in educational institutions have reported low PWB among Nigerian students (Ubani et al., 2023; Ugwueze et al., 2021). This trend has negative implications for classroom engagement and the performance of students in higher institutions.

There exists a commendable empirical effort to investigate the PWB of college and university students. These efforts have been primarily focused on individual dispositions and relational factors in the school environment. Recent studies are of the opinion that a good support system, relationships, and personal outlook on life are significant determinants of students' PWB. This is seen in studies that have examined factors such as adaptability, personality traits, social support, social exclusion, self-compassion, spirituality, and academic expectation as a strong determinant of students' well-being (Arslan, 2018; Holliman et al., 2021, 2022; Poots & Cassidy, 2020).

Research on psychological capital (PsyCap) has been dominated by studies in organizational behaviors and attitudes in the workplace (Elbers et al., 2023; Gao, Yue, & Li, 2023). This is mostly because the idea was first created to take organizational samples into account. Investigating the effects of these advantageous psychological characteristics on students has become essential in

recent times. While few studies have examined the role of PsyCap on PWB in higher institutions, the processes behind this association are still not well understood and other potential explanations may exist for the observed relationship. Therefore, literature on the independent effect of PsyCap and student-student relationship (SSR), and of the mediating effect of SSR on PWB is considered sparse, especially in terms of studies among students from non-western cultural backgrounds such as Nigeria and other Sub-Saharan African countries. Regarding relationships within the school environment, the scarcity of published research is even more pronounced, since most studies have been conducted on teacher-student relationships and their impact on engagement (Thornberg et al., 2022), classroom behavior (Endedijk et al., 2022), and PWB (Haldimann et al., 2023). Consequently, it has become necessary to examine the individual positive psychological traits (PsyCap) and relationships both within and outside of the classroom (SSR) and their impact on students' PWB. The roles of the positive resources and strength inherent in an individual indirectly influencing PWB have yet to be investigated within the Nigerian educational milieu. Therefore, the current study aims to understand the circumstances in which PsyCap and SSR predict students' well-being via a mediational model. Also, the dimensionality of students' PsyCap in the presence of SSR has not been examined in the literature. On this ground, this study argues that the manifestation of these dimensions on students' PWB might differ in an environment where SSR is active.

2. Literature Review

2.1. Theoretical Background and Development of Hypotheses

Self-determination theory (SDT) was propounded by Deci and Ryan (2000), and is built upon the idea that people work toward satisfying three primary basic psychological needs, that of competence, autonomy, and relatedness. Meeting these demands is considered essential for human psychological development. The capacity of an individual to make decisions on their own, free from outside influence, is considered to be autonomy. Competence refers to how capable an individual perceives themselves to carry out a given task effectively, while relatedness refers to the feelings or connection for others and the sense of belongingness these relationships bring. Psychological need satisfaction can be promoted or impeded by different aspects of the social environment involved, and the college or university environment is no exception. These three basic needs accentuate the six factors listed in Ryff's description of PWB. Specific dimensions of PWB, such as purpose in life, environmental mastery, and personal growth, seem to give prominence to the need for competence, which, according to Deci and Ryan (2000), refers to "feeling effective in one's ongoing interactions with the social environment and experiencing opportunities to exercise and express one's capacities" (p. xx). According to Owen et al. (2014), individuals may be motivated to participate in actions that support PWB by their desire to fulfill these fundamental psychological requirements outlined by the SDT.

Psychological capital is a multidimensional construct consisting of optimism, hope, resilience, and self-efficacy (Chen & Tang, 2023; Luthans et al., 2007). The basic tenet of SDT is that all people are born with an innate capacity for creativity and the formation of a more comprehensive and distinct sense of self (Chen & Tang, 2023). Students have the desire to build relationships with themselves and those around them. When the requirements for competence, autonomy, and belongingness are satisfied, interpersonal development and individual well-being are enhanced. Consequently, PsyCap is considered in the current study as a factor of psychological well-being, since hope, optimism, resilience, and self-efficacy are necessary in the strengthening of an individual's sense of autonomy, competence, and relationships within the school environment. Therefore, the current study aimed to ascertain the impact of PsyCap on students' well-being. Moreover, psychological well-being was also examined within positive psychological traits that focus on fostering pleasant emotions as a means to enhancing experiences and functionality (Ryan & Deci, 2001). Student-student relationships are interactions between students that take into consideration how

these students relate to one another both within and outside of the classroom. Research has demonstrated that SSR is a reliable indicator of a person's sense of relatedness, perceived competence, and ability to control their behavior in the school sociocultural setting (Ibrahim & El Zataari, 2020; Yao, 2016). In the classroom, relatedness refers to the growth of meaningful connections with those considered important, such as student peers and teachers, via a sense of shared meaning and purpose. These factors have been shown to have a significant effect on PWB (Jackman et al., 2023; Quill & Kahu, 2022).

2.2. Psychological Capital and Psychological Well-Being among Students

According to Luthans et al. (2007), PsyCap refers to an individual's positive state of development, and consists of four distinct characteristics: hope (pursuing objectives with persistence and, when required, changing directions to achieve goals); self-efficacy (possessing the self-assurance to take on and make the required effort to succeed at difficult tasks); resilience (the capacity to endure adversity with persistence, overcome obstacles, and "to go above and beyond" in order to succeed); and, optimism (ascribing favorable attributes to current and future successes). Put differently, PsyCap denotes a constructive evaluation of an individual's ability to surmount challenges through consistent effort, and this evaluation encompasses four aspects: hope; self-efficacy; resilience; and, optimism. These positive psychological states have been studied empirically, with the literature having indicated that as individual and composite constructs, they are positive predictors of students' PWB. As an example, Prasath et al. (2021) examined the effects of PsyCap and coping strategies on students' well-being, and established that both variables significantly and positively predict PWB.

The premise behind this connection is that PsyCap includes personality traits that impact an individual's well-being by offering chances for self-improvement, self-reliance, lucrative professional possibilities, and fulfilling interpersonal interactions (Gibson & Hicks, 2018; Xu & Choi, 2023; Zhen & Liu, 2023). Several well-being outcomes, including positive mental health (Sood & Puri, 2023), life satisfaction (Xu & Choi, 2023), and psychological distress (Alat et al., 2023; Prasath et al., 2022), have shown a correlation with PsyCap. Although most PsyCap research has concentrated on the work domain, the ability to endure and overcome is not unique to the work environment. PsyCap is a necessary tool that can help students deal with the challenges of higher education; however, PWB studies have undervalued the significance of looking at the individual dimensions of students' well-being. Furthermore, given that empirical evidence has demonstrated PsyCap's independence and discriminant validity and that it can account for varying degrees of autonomy, environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance among the dimensions of PWB, it could be interesting to observe whether or not psychological capital has a different impact on these dimensions (Bahamón et al., 2020; Manchiraju, 2020). Consequently, it is postulated that:

Hypothesis 1 (H1): PsyCap has a positive a significant relationship with (a) PWB, (b) autonomy, (c) environmental mastery, (d) personal growth, (e) positive relations, (f) purpose in life, and (g) self-acceptance.

2.3. Psychological Capital and Student-Student Relationship

SSR is the interaction between students, and describes how students relate to one another in and out of the classroom. According to the published research, it is a trustworthy measure of a person's perceived competence, sense of relatedness, and capacity for behavior control within a particular sociocultural context, like a school (Ibrahim & El Zataari, 2020; Yao, 2016). SSR is evaluated across three dimensions; satisfaction, instrumental help from others, and conflict. Satisfaction refers to the degree to which the SSR is fulfilling and positive, marked by warmth, support, and affection. Instrumental help refers to the extent to which others (coursemates) offer guidance, support, and

exhibit a compassionate demeanor. The conflict dimension refers to the degree of negativity and unpleasantness experienced within the SSR (Ang et al., 2020).

In the context of higher education, student engagement and relationships are of significant importance. Students must be engaged during their classes in order for them to be willing to learn, considering they spend approximately 25% of their waking hours in a classroom environment (Anakwue et al., 2021). Students are perceived to be more engaged and motivated in their classes if they have a healthy relationship established with their teachers and with their fellow students. However, the literature contains limited research on how PsyCap affects relationships between students. The justification for the idea that PsyCap fosters relationships between students is based on the notion that it represents positive psychological traits that are necessary for interpersonal adaptation (Bi & Jin, 2021). Students with high positive PsyCap are adept at adjusting to college life, with the resilience factor having the biggest impact on their social, emotional, and physical adaptation, while hope has been shown to have the most effect on academic adaptation (Jang & Lee, 2023). Empirically, PsyCap has also been linked with study engagement and intrinsic motivation (Siu et al., 2014), academic performance and parent-child relationship (Li et al., 2022), and the teacher-student relationship (Carmona-Halty et al., 2019). Accordingly, it is hypothesized that PsyCap is a significant predictor of SSR and its dimensions:

Hypothesis 2 (H2): PsyCap has a positive relationship with (a) SSR, (b) satisfaction, (c) help, and (d) the conflict dimension.

2.4. Student-Student Relationship and Psychological Well-Being

Within the educational setting, relatedness pertains to the development of significant relationships with significant individuals, like teachers and student peers, through a sense of common meaning and purpose. PWB has been demonstrated to be significantly impacted by these factors (Jackman et al., 2023). Consequently, relationships between students both on and off campus may be a strong indicator of their PWB. According to empirical research, SSR is a reliable indicator of academic achievement (Anakwue et al., 2021) and societal involvement (Wanders et al., 2020). Through interaction with others and engagement in various daily social and cultural activities, students can enhance their citizenship competencies and PWB (Lin et al., 2022; Wanders et al., 2020).

Lin et al. (2022) examined the teacher-student relationship and its impact on PWB and reported that, specifically, a negative association was revealed between psychological symptoms (both internalizing and externalizing) and supportive student-teacher relationships. Therefore, it can be said that through healthy relationships, teachers can communicate patterns of interaction and emotional and social attributes that support students' adaptation to a context and, as a result, increase their PWB. Hence, it is proposed that SSR can equally produce this effect since student peers in the school environment can serve as an emotional reference point. Recently, Franco et al. (2023) examined the nexus between the perception of school atmosphere and mental health among middle school youth. The researchers evaluated perceived school climate from three perspectives: awareness/need of reporting violence; student-teacher relationships; and, SSR. Their study indicated that help-seeking and reporting awareness had an inverse correlation with mental health indicators, that student-teacher relationships were positively associated with anxiety and inversely associated with hostility, and that SSR was inversely correlated with depressive symptoms. Consequently, it is proposed that:

Hypothesis 3 (H3): SSR has a positive and significant relationship with (a) PWB, (b) autonomy, (c) environmental mastery, (d) personal growth, (e) positive relationship, (f) purpose in life, and (g) self-acceptance.

2.5. Student-Student Relationship as a Mediator between PsyCap and PWB

The assertion that SSR has an indirect effect in the proposed nexus between PsyCap and students' well-being is supported by theoretical and empirical literature. Self-determination theory provides support for the indirect effect of SSR, with its emphasis on relatedness, autonomy, and competence as the three basic and universal human emotional needs (Ryan & Deci, 2017). Originally defined as the need to feel connected to and be a part of something, relatedness is the need to form close social relationships with others. This close relationship is essential for PWB since it provides students with the necessary social support needed to deal with the challenges of obtaining a university education. Studies have shown that the support students receive via a good relational framework can help alleviate psychological distress, promote mental health, and help students cope more effectively with the university environment (Akbar & Aisyawati, 2021; Kassim & Ahmad Badayai, 2023; Rathakrishnan et al., 2022).

The idea that SSR mediates the nexus between composite PsyCap and students' well-being is built on the notion that relationships are essential to the well-being of individuals. The literature has shown that positive functioning and quality of life (PWB and social relationships) come with a good support system provided by family, peers, and significant others (Alsubaie et al., 2019; Arslan, 2018). The domains of social capital both within and outside of the school environment have also been shown to significantly reduce psychological distress, i.e., students' psychological distress was substantially and negatively correlated with social capital domains such as neighborhood trust, student-teacher interpersonal trust, student interpersonal trust, and student support in school (Novak & Kawachi, 2015). According to published research, SSR is a trustworthy measure of a student's sense of relatedness, perceived competence, and capacity for behavior control (Ibrahim & El Zataari, 2020). Hence, students' psychological health can be safeguarded by utilizing social support networks as a valuable resource. Consequently, it is proposed that:

Hypothesis 4 (H4): SSR mediates the relationship between PsyCap and PWB.

3. Methodology

3.1. Procedure

The Helsinki Declaration for studies involving human participants was taken into account in all procedures related to the current study, and the Psychology Department's (Delta State University) Research Ethics Committee (RECPSY) gave its approval for this research. A protocol incorporating a sociodemographic questionnaire, instruments, and informed consent was developed. The informed consent included a description of the study's purpose and theme, as well as highlighting that participation was entirely voluntary. The participants were guaranteed complete anonymity and that the collected data would remain completely confidential. As requirements for inclusion in the study, students had to have been attending a full-time degree program within any of the recognized levels outlined by the university council, and must have expressed interest in taking part in the current study through verbal consent. Failure to satisfy these inclusion requirements and incompleteness of the survey were the study's exclusion criteria, hence surveys with a significant number of missing responses were eliminated from the study. Systematic sampling was employed in order to select three of the seven on-campus faculties using 2 as the *n*th case, whereas convenience sampling was employed to select students who met the inclusion criteria in these faculties.

3.2. Participants

The sample of the study consisted of 200 undergraduate students from Delta State University, Nigeria. The sample was comprised of 51 (25.5%) male and 149 (74.5%) female students, with a mean age of 21 years ($SD = 2.39$). All 200 participants reported as having a marital status of single. The demographic analysis also indicated that 83 (41.5%) were year one students, whilst 52 (26%) were

year two students, 40 (20%) were year three students, and 25 (12.5%) were year four students. The first-year students were deemed to have had sufficient experience at the university, since the study took place during the second semester of the 2022-2023 academic year. The sample size was considered adequate since it met the maximum of 20 to 1 sample-to-variable ratio, and the sample size generated by the G*power software was sufficient to determine power and statistical significance (Verma et al., 2020).

3.3. Measurement

A self-report questionnaire was used to gather sociodemographic information about the study's participants. PsyCap, SSR, and PWB were all evaluated with validated scales, with the three scales combined comprised of 44 items, each with a 5-point, Likert-type response option (from 1 = *strongly disagree* to 5 = *strongly agree*).

Students' Psychological Capital: PsyCap was measured with the 12-item multidimensional student PsyCap scale developed by Fabiola and Alessandro (2021). The student PsyCap scale was based on a similar theoretical foundation to the original PsyCap scale developed for individuals working within an organization (Luthans et al., 2015; Martínez et al., 2019). The student PsyCap scale consisted of four dimensions: hope; self-efficacy; optimism; and, resilience, with each consisting of three items. Sample items from the scale include, "I believe that good things will happen to me through my studies" and "I get stronger after facing failures in my studies." The developers confirmed acceptable content validity (assessed for linguistic clarity, practical applicability, and theoretical significance) with a coefficient which ranged from .67 to .99.

Student-Student Relationship: In measuring SSR, the authors recognized the need to adapt a scale that could accurately capture the relationship dynamics among students in higher education institutions. The current study adapted the student version of the instrument originally developed by Ang et al. (2020) to measure the teacher-student relationship. The inventory was remodeled and reworded in order to best suit the purpose of this research, which is within the confines of SSR. As such, the word "teacher" in the original scale was replaced with "coursemates," selected for the purpose of specificity, as outlined in the original scale. This 14-item multidimensional scale measured relationships among students under three dimensions: satisfaction (five items); instrumental help (five items); and, conflict measured (four items). Sample items include "I enjoy attending classes with my coursemates" and "If I need someone to listen to, I will go to my coursemates." The four items for the conflict dimension of the adapted instrument were reversed-coded. The composite score for all three dimensions indicates the level of relationship among the students.

Psychological Well-being: Student PWB was measured using the Ryff and Keyes (1995) PWB scale. This 18-item scale is comprised of six dimensions: autonomy; environmental mastery; personal growth; positive relations; purpose in life; and, self-acceptance. Sample items from the scale include "In general, I feel I am in charge of the situation in my life" and "People would describe me as a giving person, willing to share my time with others." The negative-worded items on the scale were reverse-coded. The developers found satisfactory psychometric properties for the dimensions and the composite construct of PWB.

3.4. Design and Statistics

A cross-sectional research design approach was utilized in the current study, with data for each variable collected simultaneously from the participants. The empirically collected data were then analyzed according to a three-step procedure. First, pre-statistical procedures via exploratory factor analysis were used to check the suitability of the SSR scale. Second, descriptive statistics, the Cronbach's alpha coefficient, normality distribution test, and zero-order correlation test of the focal

variables were conducted. Third, regression analysis was used to test the research hypotheses through version 25 of IBM's SPSS (supported by model 4 of the PROCESS Macro v4.2 tool).

3.5. Control variables

Age and gender were selected as covariates in the mediation model. The sociocultural theory of Eagly and Wood (2012) lends credence to the mediation model's use of age and gender as control variables. According to Cooper et al. (2020), examining covariates is essential, since it mitigates potential bias caused by missing variables in a model. Notably, similar studies in the literature also adopted gender and age as covariates (Gao, Li et al., 2023; Wanders et al., 2020; Zhang et al., 2022).

4. Results

Exploratory factor analysis (EFA) was performed on the collected data to examine the factor loadings of the adapted scale used to measure SSR, which revealed a three-factor model. The sample's adequacy index was evaluated (KMO = .832; RMSEA = .083; Bartlett: $X^2 = 1,223$; $p < .001$) and was considered satisfactory considering that the scale is multidimensional. The factor loadings were found to be satisfactory. The parallel analysis served as the basis for factor selection, making it possible to compare the eigenvalues produced by the data matrix with those produced by a simulation using randomly generated data of the same size. It was possible to associate each variable with its corresponding factor thanks to the factor loadings for each variable. The instrument's three primary factors or components were found to account for 49.43% of the total cumulative explained variance.

4.1. Common Method Variance, Reliability, and Validity

The presence of common method variance (CMV) in the collected data was evaluated using the Harman single-factor test. According to the test, 14.30% of the total variation was explained by the first factor, and factors with an eigenvalue of 1 or higher accounted for 66.74% of the variation overall. According to these numbers, the dataset remained unaffected by CMV since the first component did not explain 50% of the overall variance (Memon et al., 2023). Following this CMV evaluation, the data were checked for normality of distribution, and the kurtosis and skewness results fell within the expected range (-2.58 to +2.58) for normally distributed data, which was deemed adequate for a sample of 200 or more (Demir, 2022). Stability was confirmed through internal consistency using Cronbach's alpha coefficient and McDonald's omega. According to the recommendation proffered by Howitt and Cramer (2017), the Cronbach's alpha values revealed sufficient reliability for each scale. Convergent validity was achieved through inter-scale correlation, and the scales' convergence validity was further supported by the satisfactory Cronbach's α and McDonald's ω coefficients (Field, 2018; Francis et al., 2022).

Table 1. Test of normal distribution and reliability statistics

	Skewness	Kurtosis	Items	Cronbach's α	McDonald's ω
PsyCap	-.678	.789	12	.811	.817
SSR	.334	.270	14	.807	.832
PWB	.307	.494	18	.629	.666

4.2. Descriptive Statistics and Correlations

Table 2 presents the mean, standard deviation, and intercorrelation among the variables. Bivariate correlation analyses, as displayed in Table 3, indicates that PsyCap has a positive relationship with PWB ($r = .23$, $p < .01$), autonomy ($r = .22$, $p < .01$), environmental mastery ($r = .21$, $p < .01$), personal growth ($r = .18$, $p < .01$), and self-acceptance ($r = .21$, $p < .01$). PsyCap was found to correlate

positively with SSR ($r = .31, p < .01$), and two of its dimensions: satisfaction ($r = .36, p < .01$) and instrumental help ($r = .27, p < .01$). SSR was also examined and found to positively correlate with PWB ($r = .30, p < .01$), and four of its dimensions: autonomy ($r = .21, p < .01$), environmental mastery ($r = .14, p < .05$), personal growth ($r = .24, p < .01$), and purpose in life ($r = .26, p < .01$).

Table 2. Mean, standard deviation, and correlation coefficient

		<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1	PsyCap	4.14	.51											
2	SSR	3.20	.63	.31**										
3	Satisfaction	3.87	.77	.36**	.66**									
4	Instrumental help	2.70	1.0	.27**	.88**									
			5			.49**								
5	Conflict	3.00	.91	-.01	.45**	-.14*	.19**							
6	PWB	3.60	.40	.23**	.30**	.17*	.21**							
								.24**						
7	Autonomy	4.01	.68	.22**	.21**		.10	.11	.56**					
						.24**								
8	Environmental mastery	3.85	.66	.21**	.14*	.08	.12	.09	.49**					
										.29**				
9	Personal growth	3.78	.57	.18**	.24**		.24**	.04	.55**	.13				
						.19**					.14**			
10	Positive relations	3.37	.85	.01	.06		.01	.14*	.62**		.01	.23**		
						.001				.24**				
11	Purpose in life	3.05	.83	.03	.26**	.01	.20**	.34**	.63**	.07	.12	.27**		
													.31**	
12	Self-acceptance	3.52	.61	.21**	.12	.14	.08	.05	.57**			.28**	.15*	.22**
										.23**	.21**			

Note. * .05; ** .01

4.3. Hypotheses Testing for the Direct and Indirect Effect

The main impact of PsyCap and SSR on PWB and its dimensions are displayed in Table 3 through simple regression analysis. The main effect of PsyCap on SSR is also shown. For the first hypothesis, PWB was significantly predicted by PsyCap ($\beta = .234, 95\% \text{ CI } [.078, .293], t = 3.39, p < .001$). According to the observed B-value, PWB increased by .185 for each PsyCap unit increase. According to the R^2 value, PsyCap explained roughly 5.5% of the variance in PWB. The regression was shown to be statistically significant, as revealed by the analysis of variance (ANOVA) test results; $F(1; 199) = 11.496, p < .001$, suggesting that PWB can be predicted from PsyCap. Specific dimensions of PWB; autonomy ($\beta = .221, 95\% \text{ CI } [.113, .479], t = 3.19, p < .002$), environmental mastery ($\beta = .212, 95\% \text{ CI } [.097, .452], t = 3.05, p < .003$), personal growth ($\beta = .183, 95\% \text{ CI } [.050, .357], t = 2.62, p < .009$), and self-acceptance ($\beta = .216, 95\% \text{ CI } [.095, .423], t = 3.11, p < .002$) were shown to be significantly predicted by PsyCap, with PsyCap explaining 4.9%, 4.5%, 4%, 2.9%, and 4.2% variance in PWB. PsyCap was not found to significantly predict the dimensions of either positive relations ($\beta = .017, 95\% \text{ CI } [-.203, .261], t = .244, p > .05$) or purpose in life ($\beta = .030, 95\% \text{ CI } [-.179, .278], t = .428, p > .05$).

The effect of PsyCap on SSR and two of its dimensions (satisfaction and instrumental help) were supported for the second hypothesis; with SSR significantly predicted by PsyCap ($\beta = .316, 95\% \text{ CI } [.226, .555], t = 4.68, p < .001$). Based on the observed B-value, SSR increased by .390 for each PsyCap unit increase. According to the R^2 value, PsyCap explained 10% of the variance in SSR. The regression

was statistically significant, as indicated by the analysis of variance (ANOVA) test results, $F(1; 199) = 21.922$, $p < .001$, suggesting that SSR can be predicted from PsyCap. PsyCap also predicted specific dimensions of SSR; satisfaction ($\beta = .365$, 95% CI [.352, .744], $t = 5.52$, $p < .001$) and instrumental help ($\beta = .278$, 95% CI [.293, .849], $t = 4.06$, $p < .001$), but was not found to be a significant predictor of conflict ($\beta = -.017$, 95% CI [-.279, .218], $t = -.243$, $p > .05$). PsyCap explained 13.3% and 7.7% of the variance in satisfaction and instrumental help, respectively.

Table 3. Simple regression analyses for direct relationships

Relationship	B	SE	β	R ²	Adj r ²	p	95% CI
PsyCap → PWB	.185	.055	.234	.055	.050	.001	[.078, .293]
PsyCap → Autonomy	.296	.093	.221	.049	.044	.002	[.113, .479]
PsyCap → Environmental mastery	.275	.090	.212	.045	.040	.003	[.097, .452]
PsyCap → Personal growth	.204	.078	.183	.034	.029	.009	[.050, .357]
PsyCap → Positive relations	.029	.118	.017	.001	-.004	.807	[-.203, .261]
PsyCap → Purpose in life	.050	.116	.030	.001	-.004	.669	[-.179, .278]
PsyCap → Self-acceptance	.259	.083	.216	.047	.042	.002	[.095, .423]
PsyCap → SSR	.390	.083	.316	.100	.095	.000	[.226, .555]
PsyCap → Satisfaction	.548	.099	.365	.133	.129	.000	[.352, .744]
PsyCap → Instrumental help	.570	.140	.278	.077	.073	.000	[.293, .849]
PsyCap → Conflict	-.031	.126	-.017	.001	-.004	.808	[-.279, .218]
SSR → PWB	.195	.043	.304	.093	.088	.000	[.109, .280]
SSR → Autonomy	.228	.075	.211	.045	.040	.003	[.080, .377]
SSR → Environmental mastery	.153	.074	.146	.021	.016	.040	[.007, .298]
SSR → Personal growth	.219	.062	.244	.060	.055	.000	[.097, .342]
SSR → Positive relations	.093	.095	.069	.005	.001	.333	[-.095, .279]
SSR → Purpose in life	.352	.090	.267	.071	.067	.000	[.174, .530]
SSR → Self-acceptance	.124	.068	.127	.016	.011	.072	[-.011, .259]

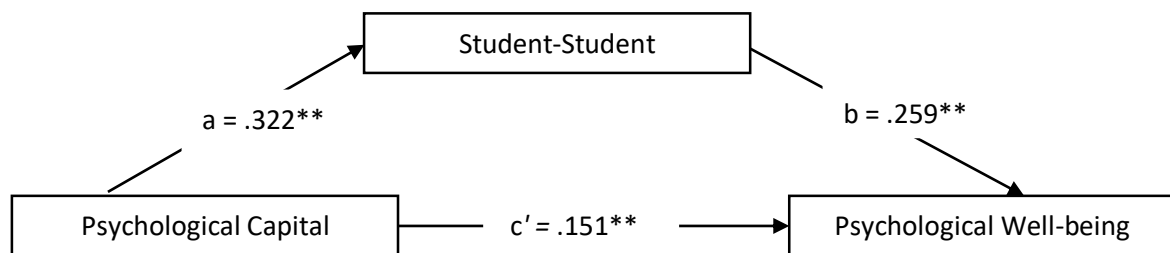
The direct effect of SSR on PWB was also examined. For hypothesis three, the result supported SSR as a positive and significant predictor of PWB and four of its dimensions. SSR predicted PWB ($\beta = .31$, 95% CI [.109, .280], $t = 4.49$, $p < .001$). Based on the observed B-value, PWB increased by .195 for each SSR unit increase. According to the R² value, SSR explained 9.3% of the variance in PWB. The regression was statistically significant, as shown by the analysis of variance (ANOVA) test results; $F(1; 199) = 20.210$, $p < .001$, suggesting that PWB can be predicted from SSR. SSR also predicted some dimensions of SSR; autonomy ($\beta = .211$, 95% CI [.080, .377], $t = 3.03$, $p < .003$), environmental mastery ($\beta = .146$, 95% CI [.007, .298], $t = 2.07$, $p < .040$), personal growth ($\beta = .244$, 95% CI [-.097, .342], $t = 3.54$, $p < .001$), and purpose in life ($\beta = .267$, 95% CI [.174, .530], $t = 3.90$, $p < .001$), but did not predict the dimensions of either positive relations ($\beta = .069$, 95% CI [-.095, .279], $t = .970$, $p > .05$) or self-acceptance ($\beta = .127$, 95% CI [-.011, .259], $t = 1.80$, $p > .05$). SSR explained 4.5%, 2.1%, 6%, and 7.1% of the variance in autonomy, environmental mastery, personal growth, and purpose in life, respectively.

Table 4. Statistical output of the mediational model

Mediational path	a	b	c'	a*b	95% CI of a*b	c	SE
PsyCap → SSR → PWB	.322	.259	.151	.084	[.039, .149]*	.186	.030

Note. * < .05; ** < .01; c' = direct effect; a*b = indirect effect; c = total effect; SE = standard error of bootstrap samples (5,000)

Table 4 presents the result of the indirect effect (mediation) model controlling for age and gender. The results indicated that PsyCap had a significant indirect effect on PWB through SSR, $\beta = .084$, 95% CI [.039, .149]. Since there was no zero value in the confidence interval statistics, a significant indirect effect was expressed.



Indirect effect, $\beta = .084$, $SE = 0.30$, 95% CI [.039, .149], ** $p < .01$

Figure 1. Mediating effect of SSR on relationship between PsyCap and PWB

5. Discussion

This study examined the direct effect of PsyCap and SSR on the PWB of university undergraduates, and also the mediating effect of SSR on the relationship between PsyCap and PWB using the propositions of self-determination theory. Aside from the direct relationship among PsyCap, SSR, and PWB, the study also investigated the dimensions and the direct effect of PsyCap on the dimensions of SSR and PWB. The final regression models for the direct relationships indicated that PsyCap appears to be a positive predictor of PWB and some of its dimensions. The related dimensions include autonomy, environmental mastery, personal growth, and self-acceptance. However, although the relationships found were positive, PsyCap did not significantly predict purpose in life or positive relations. Consistent with self-determination theory (Deci & Ryan, 2000), these results demonstrated the role of competence, autonomy, and relatedness in promoting growth and well-being, which are all implicated in the domains of PsyCap. Interpersonal development and personal well-being were shown to improve when the needs for competence, autonomy, and belongingness are met. This is because hope, optimism, resilience, and self-efficacy are essential in fostering a strong sense of autonomy, competence, and relationships in the school setting, as seen in the direct relationship between PsyCap and the autonomy, environmental mastery, personal growth, and self-acceptance dimensions of psychological well-being. This finding is consistent with the existing literature that examined the link between positive psychological traits and well-being among students. According to the works of Gibson and Hicks (2018), Xu and Choi (2023), and also Zhen and Liu (2023), PsyCap is comprised of personality traits that can impact an individual's well-being by offering opportunities for personal growth, successful career paths, independence, and fulfilling interpersonal relationships. The literature has associated PsyCap with a number of well-being outcomes, including satisfaction with life, positive mental health, and psychological distress (Alat et al., 2023; Prasath et al., 2022; Sood & Puri, 2023; Xu & Choi, 2023).

The current study's second hypothesis stated that that PsyCap would be a significant and positive predictor of SSR, and this was supported. The results showed that PsyCap positively predicted SSR and two of its dimensions (satisfaction and instrumental help). Hence, the extent to which students feel positive emotions, satisfaction, and receive instrumental help from others is affected by PsyCap. This result agrees with the extant studies on PsyCap and interpersonal relationships. Based on the notion that it represents positive psychological characteristics required for interpersonal adaptation, PsyCap helps students form relationships with others (Bi & Jin, 2021). The work of Jang and Lee (2023) also supports the current findings, since they observed that students with a positive PsyCap score

were skilled at adjusting to college life, while Carmona-Halty et al. (2019) provided more empirical support by linking PsyCap with teacher-student relationship.

The third hypothesis stated that SSR would be a significant and positive predictor of PWB, and this was also supported. The study's result showed that SSR predicted PWB and some of its dimensions; specifically, autonomy, environmental mastery, personal growth, and purpose in life. This finding also aligns with the premise of self-determination theory (Deci & Ryan, 2000), with an individual's sense of relatedness, perceived competence, and ability to control their behavior in a specific sociocultural setting, such as a school, being a reliable indicator of SSR (Ibrahim & El Zataari, 2020; Yao, 2016). Relatedness in the classroom refers to the development of meaningful connections with significant others, such as student peers and teachers, through a sense of shared meaning and purpose. According to Jackman et al. (2023), PWB is affected by these factors. This result is also consistent with that of research by Franco et al. (2023), who indicated that an association exists between perceived school climate (from the perspective of reporting violence, student-teacher relationships, and SSR) and mental health. SSR was shown to significantly reduce depressive symptoms among students, enhancing the domains of autonomy, environmental mastery, personal growth, and purpose in life, through SSR.

The current study's fourth hypothesis, as in the mediational model, was also supported, since it was shown that PsyCap and PWB can be predicted through SSR. This outcome was anticipated since it supports the researchers' proposition. According to the model's mediation effect, SSR was shown to partially mediate the impact of PsyCap on PWB. The total effect was also statistically significant, suggesting that PsyCap has a role in the model that predicts employee PWB. This outcome agrees with the body of existing research that has shown that a good support system (via peers, family, and significant others) is essential for the quality of school life and positive functioning in higher education institutions (Alsubaie et al., 2019; Arslan, 2018).

6. Conclusion and Recommendations

In conclusion, the current study's findings are considered important since they demonstrate how PsyCap and SSR come together to predict psychological well-being, supporting Ryan and Deci's (2000) self-determination theory. Therefore, the current study recommends that university academicians, administrators, and policymakers provide an environment that fosters a positive relationship between student peers, a sense of competence, and autonomy, all of which are implicated in the PsyCap and SSR domains and have a favorable impact on students' PWB.

7. Limitations and Avenues for Further Studies

Although the current study offered a detailed examination of the indirect effect of SSR on the PsyCap-PWB relationship, certain limitations exist in the study. Firstly, the sample used for the study was sourced from the Abraka campus of Delta State University, Nigeria. Although the data was representative based on the sampling method used in the study, there still exist certain geographical restrictions in the data. Therefore, the results may not be as broadly applicable (generalizable) as they could be since only one geographic location was used to recruit the study participants. In order to obtain a more robust conclusion, future research should be conducted that examines an extended sample with undergraduate students from other regions of Nigeria.

Secondly, the current study evaluated PsyCap, SSR, and PWB using only self-reported measures, or self-rating scales, which may have been prone to recall bias. Due to social desirability, respondent bias may have existed as a result. Although procedural controls for CMV were included in the study's design, it is usually considered difficult to control for socially desirable responses in question-based research. Therefore, it would be better to measure the constructs using more objective evaluation means. Future studies on this topic should therefore be multi-centered, incorporating student data

from a number of different higher education institutions, since the current study was only conducted at a single campus site of one university. Furthermore, a multi-level analysis should be conducted that accounts for particular demands and needs based on geographic location or sociodemographic features, since these may affect the well-being of the participants (i.e., university undergraduates).

Declarations

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