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Presence of Meaning in Life and Subjective Well-being as Mediators of Association Between Sense of Community and Academic Engagement

Mediators of sense of community and academic engagement

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Presence of Meaning in Life and Subjective Well-being as Mediators of Association Between Sense of Community and Academic Engagement

Abstract

We examined the associations between sense of community (SoC) and multidimensional academic engagement, including whether meaning in life and subjective well-being mediate the relationships. Participants were Nigerian students who completed the Classroom Sense of Community Inventory–School Form (CSCI-SF), Meaning in Life Questionnaire's (MLQ) Presence subscale, Brief Adolescent Subjective Well-being in School Scale (BASWSS), and Utrecht Work Engagement Scale – Student Version (UWES-S-9). Data was analysed using Model 6 of Hayes' regression-based PROCESS module. Results showed that both presence of meaning and subjective well-being mediated the effects of aspects of SoC on vigour, dedication and overall academic engagement. The effects of SoC on absorption was only mediated by subjective wellbeing. Mediation pathways were not significant for the effects of learning SoC on absorption. In all cases, the strongest mediation existed in the paths linking social SoC to academic engagement through subjective wellbeing. Promotion of classroom SoC may facilitate presence of meaning in life and subjective wellbeing thereby enhancing academic engagement

Keywords: Adolescence, catholic church, education, mediation, seminary, well-being.

Presencia de significado en la vida y bienestar subjetivo como mediadores de la asociación entre sentido de comunidad y el compromiso académico

Resumen

Se examinaron las asociaciones entre el sentido de comunidad (SoC) y el compromiso académico multidimensional, incluyendo si el sentido de la vida y el bienestar subjetivo median en las relaciones. Los participantes fueron estudiantes nigerianos que completaron el Inventario de Sentido de Comunidad en el Aula-Formulario Escolar (CSCI-SF), la subescala de Presencia del Cuestionario de Sentido de Vida (MLQ), la Escala Breve de Bienestar Subjetivo del Adolescente en la Escuela (BASWSS), y la Escala de Compromiso con el Trabajo de Utrecht - Versión Estudiantil (UWES-S-9). Los datos se analizaron mediante el modelo 6 del módulo PROCESS de Hayes basado en regresión. Los resultados mostraron que tanto la presencia de significado como el bienestar subjetivo mediaron los efectos de los aspectos de la SoC sobre el vigor, la dedicación y el compromiso académico general. Los efectos de la SoC sobre la absorción sólo estaban mediados por el bienestar subjetivo. Las vías de mediación no fueron significativas para los efectos del aprendizaje de la rsc sobre la absorción. En todos los casos, la mediación más fuerte existió en las vías que vinculan la rsc social con el compromiso académico a través del bienestar subjetivo. La promoción de la rsc en el aula puede facilitar la presencia de sentido en la vida y el bienestar subjetivo, mejorando así el compromiso académico.

Palabras clave: Adolescencia, iglesia católica, educación, mediación, seminario, bienestar.

Introduction

Positive student outcomes in education is an important research area which has received increasing research interest as reflected in issues as academic engagement (Chukwuorji, Ituma, & Ugwu, 2018; Zhou et al., 2019; Li et al., 2023). Substantial literature has produced clear and consistent evidence, outlining the positive effect of academic engagement in educational environments in terms of satisfaction with educational experiences, performance, and other achievement related outcomes (Ben-Eliyahu et al., 2018; Casuso-Holgado et al., 2013; Smithikrai et al., 2018; Steinmayr et al., 2018; Vizoso et al., 2018; Xie et al., 2019; Xu et al., 2023). As a positive phenomenon (Seligman & Csikszentmihalyi, 2000), positive effects of academic engagement have also been obtained in non-educational contexts in terms of general self-esteem (Liem & Martin, 2011) and optimised functioning (Phan & Ngu, 2015).

Existing literature have advanced several conceptualisations of academic engagement, but Schaufeli's theorising describes the construct as reflecting high levels of energy, persistence, and positive effort in activities, high levels of involvement and challenge, and high levels of concentration during students' performance (see Schaufeli et al., 2002a). In other words, academic engagement encompasses three core facets: absorption, dedication, and vigour. Vigour is the investment of effort, high energy level, resilience, and persistence of the individual in spite of setbacks and difficulties; while dedication refers to inspiration, enthusiasm, significance, challenge, and pride in academic tasks. Absorption represents full concentration and happy involvement in one's studies, whereby time passes quickly and one has difficulties detaching oneself from studies (Schaufeli et al., 2002a, b; Phan, 2014). The relevance of Schaufeli's multi-faceted perspective is the differentiation of academic engagement into aspects that represent different motivational attributes, with demonstrated support for its construct validity, relevance and applicability to classroom learning (See Phan,

2014). Hence, it provides ample opportunity for the exploration of diverse impacts of psychosocial and situational variables in academic engagement (Chukwuorji, Ifeagwazi et al., 2018).

The question of how school sense of community influences academic engagement remains an important area that is worthy of investigation by researchers. Positive interventions at school can be more effective and purposive, when there is deeper understanding of the association between well-being and academic outcomes and their influencing factors (Grabel, 2017). The mechanism through which sense of community influences well-being may explain how and why it is beneficial for engagement in academic work. The current study is aimed at examining the roles of sense of community, meaning in life and subjective wellbeing in academic engagement among male students in the minor seminary.

Sense of community (SoC) has been described as a powerful tool for learning (Bickford & Wright, 2018) and promotion of wellbeing (Barbieri & Zani, 2015). In the educational context, SoC is theorized as a feeling of being connected to the institution in terms of personal fit with other students and the school community, and academic ability (Morrow & Ackermann, 2012; Tough, 2014). SoC in the classroom creates a culture that builds on students' strengths and heals their hurts so that learning can occur; and the opportunities and structures by which students can help and support one another (Hittie, 2000). The major characteristics that underlie SoC in learning include feelings of similarity of needs, importance of learning, recognition, friendship, connectedness, acceptance, thinking critically, safety, group identity, and absence of confusion (Rovai, 2002). A strong SoC is anchored on the student's feeling of being part of a learning community where the student contributes to a common knowledge pool and where community spirit is enabled through social interactions (Rovai et al., 2004). Thus, it is expected that students will have both sense of learning community and sense of social community (Rovai, 2002).

Evidence of the positive contributions of connectedness, relatedness, belongingness, and integration to student engagement abounds in the literature (e.g., Juvonen et al., 2012; Tovar, 2013; Wang & Eccles, 2013; Wilson et al., 2015). An insightful demonstration of the linkage of social relationships and participation in the wider educational community to academic engagement is the Duke Social Relationships Project (see Asher & Weeks, 2015). The most striking finding in the study was that students who were more academically engaged reported having positive wellbeing across multiple domains. Using Latent growth modelling King (2015) demonstrated that sense of relatedness positively predicted engagement, achievement, and well-being. Chukwuorji, Ifeagwazi et al. (2018) found that SoC had a significant impact on academic engagement, but the dimensions of academic engagement were not considered by the researchers. It is the consideration of how SoC may be related to the engagement dimensions that may provide a more nuanced understanding of the nature of the process.

Meaning in life is one of the core components of a eudaimonic (functioning well) conceptualization of well-being (Ryan & Deci, 2001; Ryff, 2018) and it is crucial to understanding the subjectivity of well-being (Qi & Minami, 2020). Meaning is defined by Steger (2012) as a web of connections, understandings, and interpretations that foster the comprehension of experiences and formulation of plans directing one's energies to the achievement of a desired future. Conceptually, the meaning making process is not only concerned with making sense of past events and experiences, but also about future imaginations of the self which often occurs in relation to others (Märtsin, 2019). The experience of meaning in life is a fundamental aspect of an individual's transition into adulthood (To & Sung, 2017), which is also advanced to be an important pathway to well-being (Khumalo et al., 2014).

Steger et al. (2006) delineated two facets of meaning in life — search for meaning and presence

of meaning. Presence of meaning represents an understanding of self and the world and how an individual fits in the broader scheme of affairs as well as having a grasp of one's sense of the purpose one is pursuing (Steger, 2009; 2012). Search for meaning makes “people to seek out new opportunities and challenges, fuelling their desire to understand and organise their experiences” (Steger et al., 2008, p. 200), and it is often associated with psychological distress (Schulenberg et al., 2014; Chukwuorji, Abiama et al., 2019). We focused on presence of meaning because it has been found to be most frequently associated with other well-being indicators (Ashok & Swati, 2015; García-Alandete, 2015; To & Sung, 2017; Yalcın & Malkoc, 2015; Zhou et al., 2022; Kero et al., 2023), and recent diary studies have shown that relationships between search for meaning and daily well-being were mediated by presence of meaning in life (e.g., Newman et al., 2018).

Recent research has shown that sense of purpose or meaning in life was associated with academic engagement (Smithikrai et al., 2018). Meaning in life could play a positive role in students' engagement because the cognitive, motivational goal-directed, and affective constituents of meaning in life enhance students' abilities and attitudes to invest in their academic activities and engage more fully (Garrosa et al., 2017). Specifically, meaning in life is related to feelings of self-confidence and control, thereby facilitating adjustment to life changes and is associated with fewer negative affective states (Demirbaş-Çelik, 2018; Garrosa et al., 2013; Wong, 2012; Van den Heuvel et al., 2009; Yuen & Datu, 2021). However, there is limited research in this line of work. In general, there is evidence that meaning in life is generally associated with psychological well-being outcomes, but whether meaning in life and satisfaction with life mediate the relationship between sense of community and academic engagement has been rarely examined.

Subjective wellbeing (swb) is a broad term for how people feel and think about their lives (Diener et al., 2018; Diener et al., 2002; Ajaero & De

Wet, 2017) and is associated with hedonic (feeling good) and evaluative (satisfaction with quality of life) conceptualizations of well-being. Well-being at school is multifaceted and comprises different attributes, as quality of life, inner satisfaction, internal state of feelings, emotions and motivation, and enriched personal experience (Phan et al., 2016). Advancement of the theoretical phenomenon of SWB at school “may entail the situational placement of SWB within a larger system of change, and its potential associations with noncognitive and cognitive process of learning” (Phan et al., p.78). Phan et al. posits that one way forward is to consider processes and procedures that may facilitate and enhance students’ well-being at school.

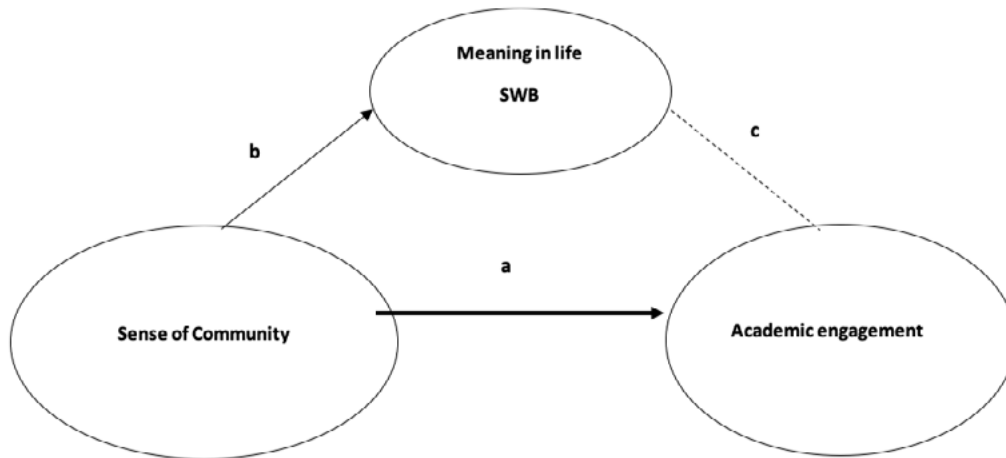
Students who experience a positive sense of subjective well-being may be more likely to engage proactively at school in their studies (Belfi et al., 2012; Buysse et al., 2009; Phan et al., 2016). Bowman (2010) reported that students with higher levels of SWB have an easier time in making the transition to college and, consequently, may be more likely to graduate. This finding supports research documenting an association between positive psychological functioning, personal adjustment and achievement (Ryan & Deci, 2000; Seligman, 2011). A study on mediation by Phan et al. (2016) reported that subjective well-being at school mediated the effects of academic and social self-efficacy on academic engagement of year 11 Australian boys and girls. However, the domain of conceptualisation was specific to students’ engagement in mathematics learning. Their restricted view is understandable given that the self-efficacy construct needed to be domain-specific when seeking participants’ responses. Similarly, fulfilment of needs was a mediator between sense of community and individual subjective well-being in a community sample of adults (Yetim & Yetim, 2014). A systematic review of 300 studies showed that students with higher levels of psychological and emotional wellbeing reported higher levels of academic achievement which may be explained as an outcome of being more engaged with their studies (Gabel, 2017).

The Present Study

Although some literature reviewed supports the association of school sense of community with academic engagement, it is necessary to elucidate the underlying mechanism of this relationship. In the current study, mediating roles of both presence of meaning in life and SWB in the link between sense of community and the dimensions of academic engagement are investigated. The previous research separately investigated the direct impacts of the variables in academic engagement. Concurrently examining the possible mediating roles of presence of meaning in life and SWB will advance the state of current knowledge on academic engagement. The inclusion of these mediators may provide information and directions regarding how these positive psychological constructs could be further harnessed and developed as psychosocial and educational interventions to promote students’ academic engagement. Based on existing literature and extant theoretical postulations, we expect that: (1) The dimensions of sense of community will be positively associated with the facets of academic engagement and the overall scores of academic engagement. (2) Presence of meaning in life will be positively associated with the facets of academic engagement and the overall scores of academic engagement. (3) SWB will be positively associated with the facets of academic engagement and the overall scores of academic engagement. (4) Presence of meaning in life mediates the relationship between sense of community dimensions and the facets of academic engagement including the overall scores of academic engagement (Figure 1). (5) SWB mediates the relationship between sense of community dimensions and the facets of academic engagement including the overall scores of academic engagement (Figure 1). (6) In addition, SWB is expected to serve as the pathway through which both sense of community dimensions and meaning in life impacts on the facets of academic engagement including the overall scores of academic engagement.

Figure 1

Conceptual model of mediator effects of meaning in life and SWB on SoC and academic engagement relationship



Method

Participants and Procedure

Participants were male students at St. John Cross Seminary, Nsukka, Enugu State, Nigeria ($N = 300$). The sample size was found to be adequate using the online statistical software G*Power 3.1.9.2 for windows (see Faul et al., 2007). Their mean age was 14.86 years ($SD = 2.51$; range = 9–24 years). They were in the senior classes I (49), II (37), and III (41). Based on place of residence, there were rural dwellers (14.67%) and urban dwellers (85.33%). The study was approved by the psychology research review board of the University of Nigeria, Nsukka. The questionnaires were completed during school time, hence permission for participation of the participants were granted by the Rector of the seminary to whom the seminarians' welfare is entrusted during school time. All participants gave consent without any coercion. The duration of minor seminary formation in Nigeria is six years—three years of junior secondary education and three years of senior secondary school. The junior seminarians are taught the secular subjects as required in all secondary (high) schools in the country. Details of minor seminary education

in Nigeria has been discussed elsewhere (see Chukwuorji, Ifeagwazi et al., 2018).

The minor seminary has a policy of relying on the Rector of the institution to make approval on behalf of the school and parents in these matters as students' involvement in research and other extramural activities that do not involve the students being taken outside the school premises. Nevertheless, consent was also sought from individual students. The students were approached in their classroom by the first author and three teachers who served as research assistants. They were requested to participate in a study on wellbeing at school and asked to strictly follow the instructions on each section of the questionnaire. They willingly accepted the questionnaire forms and completed them. Because of high disciplinary standards set out by the seminary rules and regulations, students were required to be in the class during the stipulated times of the day. None of the seminarians in the class at the time of the visit to their classes declined to participate in the research. The high participation rate might be because the students were told that the information to be obtained is not going to be used against them and that they were not expected to write any identifying personal

information on the form. From our experience as researchers in Nigeria, respondents who have not become too sophisticated in test taking are usually very excited to participate in surveys due to its novelty to them. They often see it as a new academic adventure from which they might gain some experience.

Measures

The Classroom Sense of Community Inventory–School Form (CSCI-SF).

The CSCI-SF (Rovai et al., 2004), is a 10-item measure of psychological SoC in the classroom. Responses are scored on a five-point Likert-style scale: 0 (Never) to 4 (Always). Negatively worded items were reverse scored. Sample items from the scale include: I feel that I matter to other students at this school (social SoC), I feel that this school does not promote a desire to learn (Learning SoC), etc. The school form of CSCI-SF was reported to be reliable and valid (Rovai et al., 2004). Chukwuorji, Ifeagwazi et al. (2018) had validated the measure among minor seminarian in Nigeria and reported a Cronbach's alpha of .82 for the total CSCI. Each respondent's score on the 10 items is summed up to obtain the total scores, and higher scores indicate higher SoC.

Meaning in Life Questionnaire - Presence of meaning (MLQ-P).

The MLQ presence of meaning subscale (Steger et al., 2006), assesses the extent to which respondents feel their lives are meaningful. The subscale is measured by five items rated on a 7-point Likert scale response format, ranging from 1 (Absolutely untrue) to 7 (Absolutely true). Sample items from the MLQ-P are: I understand my life's meaning, I have a good sense of what makes my life meaningful, etc. The scale has good reliability and validity (see Steger et al., 2006; Chukwuorji, Ifeagwazi & Eze, 2019). In the present study the Cronbach's α was .78.

Brief Adolescent Subjective Wellbeing in School Scale (BASWSS).

The 8-item BASWSS (Tian et al., 2015) assesses the cognitive and affective components of SWB in school, and it is utilised for the assessment of well-being when brevity is an important consideration. Respondents indicate how the questions apply to them by choosing the options of 1 (Very strongly disagree) to 6 (Very strongly agree). Sample items include: My school is provided with good school rules and facilities; The curriculum and homework assigned are suitable, etc. However, for the items measuring positive affect (In school, the frequency of my pleasant feelings is...), and negative affect (In school, the frequency of my unpleasant feelings is...), the response options range from 1 (Never) to 6 (Always). The Cronbach's α internal consistency reliability was .82, and it had convergent, predictive and discriminant validity, as evidence of its psychometric properties. In the present study, we obtained α of .84.

The Utrecht Work Engagement Scale–Student Version (UWES–S–9).

UWES–S–9 (Schaufeli & Bakker, 2003) is a 9-item measure of the dimensions of academic engagement: vigor, dedication, and absorption. Each of the facets is assessed with three items, on a 6-point Likert-style response format ranging from 0 (never) to 5 (all the time). Scores for the facets are calculated by the sum of the scores of each respondent on the 3 items. Higher scores indicate higher academic engagement on the particular dimension. UWES-S-9 has shown adequate reliability and validity (Schaufeli & Bakker, 2003; Ugwu et al., 2013). A previous study on this current sample by Chukwuorji, Ituma and Ugwu (2018) had confirmed the three-factor structure of UWES–S–9, with Cronbach's α values of .78 (absorption), .76 (dedication), .79 (absorption), and .85 (total 9-item scale). We shall use the three facets and the total scale score in this study. Overall scale score is derived by aggregating the scores on the three dimensions. Internal consistency

reliability (Cronbach's α) in the current study were .73 (absorption), .78 (dedication), .81 (absorption), and .79 (total 9-item scale).

A socio-demographic questionnaire was completed by the participants to provide information on age, parental educational status, and class.

Data Analysis

Our data met the assumptions of normality as evidenced by estimates of -0.47 to 1.63 and -1.72 to 1.68 , for skewness and kurtosis, respectively. The sizes of these values were all within acceptable ranges (less than 2.0 for skewness and less than 3.0 for kurtosis) for a normal distribution (Tabachnick & Fidell, 2007). Pearson's correlation was used to ascertain the bivariate associations between age, parents' education, class, sense of community dimensions, presence of meaning in life, subjective well-being, and academic engagement dimensions. None of the demographic factors were significant correlates of academic engagement facets, and so they were not included in the main analysis for testing the hypotheses. Hayes (2013) regression-based PROCESS macro for SPSS was used to test the mediation hypotheses. Given that there are two mediators in this study, we used model 6 of the

PROCESS macro which allows for the inclusion of two simultaneous mediators. The macro generates bias-corrected bootstrapped confidence intervals (CI) for total and specific indirect effects of sense of community dimensions (independent variable) on each of the academic engagement dimensions (dependent variable) through presence of meaning in life and subjective well-being (mediator). The advantages of bootstrapping over the traditional p -values in tests of hypotheses have been discussed elsewhere (see Cumming, 2014). Mediation is tested by determining whether or not the CIs contain zero (Fritz & MacKinnon, 2007). If zero does not occur in the CI, then the mediation (indirect) effect holds. Due to its superiority to Sobel's test, the PROCESS module is currently the gold standard in tests of mediation hypotheses (See Chukwuorji et al., 2019).

Results

Table 1 indicated the range of scores, mean and standard deviation for participants' age, sense of community, presence of meaning in life, well-being, and academic engagement. Correlations in Table 2 indicated that older age was associated with higher social SoC but lower learning SoC.

Table 1

Range of scores, mean and standard deviation for participants' age, sense of community, presence of meaning in life, well-being and academic engagement

Variable	Range	Mean (M)	SD
Age	9-24 years	14.86	2.51
Social SOC	0-19	9.51	3.93
Learning SOC	0-20	13.60	2.94
Presence of Meaning in Life	10-33	24.29	3.88
Well-being	6-37	27.07	5.15
Vigour	0-15	9.92	3.30
Dedication	1-15	12.46	2.84
Absorption	0-15	9.31	3.24
Academic engagement (total)	8-45	31.72	7.59

Note. SOC = Sense of community.

In Table 2, those in higher classes reported higher social SoC but lower learning SoC, lower swb and lower vigour in academic engagement. Parent's level of education was not associated with any of the study's variables. Social SoC was positively

associated with learning SoC, presence of meaning in life and well-being. Learning SoC and subjective well-being were positively related to all the study's variables. The correlations coefficient between the facets of academic engagement were all positive.

Table 2

Correlations of socio-demographic factors, sense of community, presence of meaning in life, well-being and academic engagement

Variables	1	2	3	4	5	6	7	8	9
1 Age	-								
2 Class	.77***	-							
3 Parental Education	-.09	-.06	-						
4 Social SOC	.21***	.20***	-.02	-					
5 Learning SOC	-.17**	-.27***	.06	.23***	-				
6 Presence of MIL	.04	-.05	.05	.16**	.18**	-			
7 Well-being	-.08	-.21***	-.06	.20***	.44***	.29***	-		
8 Vigour	-.07	-.20**	.01	.07	.35***	.34***	.42***	-	
9 Dedication	-.06	-.10	.03	.09	.38**	.34***	.41***	.61***	-
10 Absorption	-.03	-.04	-.00	.08	.25***	-.12*	.21***	.41***	.44***

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; SOC = Sense of community; MIL = Meaning in life.

To control Type 1 error associated with testing whether the independent variables and the mediators predict the academic engagement and its three dimensions, we applied the Bonferroni correction method. Our comparison time (m) in this study was 4. Hence, the adjusted alpha for our hypotheses testing was $p < .0125$ (that is, $.05/4$). The direct effect of social SoC on the academic engagement dimensions as well as the academic engagement total score were not significant. The regression coefficients (B s) were as follows: .06 (vigour), .06 (dedication), .07 (absorption), and .19 (academic engagement total). For learning SoC the

B s for its direct effect on the academic engagement dimensions as well as the academic engagement total score were all significant at $p = .000$. - .39 (vigour), .37 (dedication), .28 (absorption), and 1.03 (academic engagement total).

Table 3, part C, D, E, and F showed the total effects of social sense of community, presence of MIL and subjective well-being in the dimensions of academic engagement and the total scores of academic engagement. Participants with presence of meaning reported positive vigour, dedication, and academic engagement total scores, but not absorption.

Table 3

Hayes regression-based process analyses for predicting academic engagement and its facets by sense of community, presence of meaning in life and subjective wellbeing

Predictors	Social SOC				Learning SOC			
	R ²	B	p	95%CI	R ²	B	p	95%CI
(A) Predicting Presence of MIL	.02				.03			
SOC		.15	.003	[.05, .25]		.24	.006	[.07, .42]
(B) Predicting well-being	.11				.23			
Presence of MIL		.35	.000	[.17, .53]		.28	.001	[.12, .45]
SOC		.21	.004	[.07, .36]		.70	.000	[.51, .88]
(C) Predicting vigour	.23				.27			
Presence of MIL		.21	.000	[.12, .30]		.20	.000	[.11, .29]
Wellbeing		.23	.000	[.15, .27]		.17	.000	[.09, .26]
SOC		-.04	.430	[-.13, .06]		.21	.009	[.05, .36]
(D) Predicting dedication	.22				.26			
Presence of MIL		.17	.001	[.07, .28]		.16	.001	[.06, .26]
Wellbeing		.19	.000	[.11, .27]		.13	.001	[.05, .21]
SOC		-.01	.760	[-.10, .07]		.22	.005	[.07, .38]
(E) Predicting Absorption	.05				.08			
Presence of MIL		.05	.393	[-.06, .15]		.05	.392	[-.06, .15]
Wellbeing		.12	.016	[.02, .21]		.07	.203	[-.04, .17]
SOC		.03	.579	[-.07, .13]		.21	.015	[.04, .39]
(F) Predicting AE total score	.23				.28			
Presence of MIL		.43	.001	[.17, .78]		.40	.001	[.16, .65]
Wellbeing		.54	.000	[.33, .75]		.38	.001	[.15, .60]
SOC		-.02	.852	[-.25, .21]		.65	.002	[.25, 1.04]

Note. SOC = sense of community; MIL = Meaning in life, AE = academic engagement total scores.

Those with high subjective well-being also reported being academically engaged in the facets of vigour, dedication and overall academic engagement, but not absorption. In the presence of both presence of MIL and swb, the predictive strength of the association between learning SoC and the academic engagement factors reduced, but they were still found to be significant. Based on the variances explained the model with the largest R^2 was the contribution of learning SoC, presence of MIL and subjective well-being to overall academic engagement. The weakest model by virtue of its R^2 was the prediction of absorption by social SoC, presence of MIL and well-being.

Bias corrected bootstrapped confidence intervals (CI) for the mediation effects are shown in Table 4. The mediation effects hold where the CI does not have

zero. It was found that presence of MIL mediated the effect of social SoC as well as learning SoC on vigour, dedication and overall academic engagement, but such effect was not found for absorption. Subjective well-being was also a mediator of the path from both social SoC to vigour, dedication, absorption and overall academic engagement. For learning SoC, swb mediated its effects in vigour, dedication, and overall academic engagement, but not absorption. The double mediation path from social SoC through both presence of MIL and swb to vigour, dedication, and overall academic engagement were significant. Such double mediation effect was not found for absorption. The double mediation paths were not found to be significant with learning SoC for any of the outcome variables.

Table 4
Completely Standardised Bootstrap Tests of Mediating Effects

Variables	Vigour		Dedication		Absorption		AE Total scores	
	<i>B</i>	<i>95% CI</i>	<i>B</i>	<i>95% CI</i>	<i>B</i>	<i>95% CI</i>	<i>B</i>	<i>95% CI</i>
<i>Social SoC (SSOC)</i>								
SSOC-> MLQ-P-> UWES-S	.04	[.01, .07]	.04	[.01, .08]	.01	[-.01, .04]	.03	[.01, .07]
SSOC-> MLQ-P ->Well-being -> UWES-S	.02	[.01, .04]	.02	[.01, .04]	.01	[.00, .02]	.02	[.01, .03]
SOC-> Well-being -> UWES-S	.06	[.02, .10]	.06	[.02, .10]	.03	[.01, .07]	.06	[.02, .11]
<i>Learning SoC (LSOC)</i>								
LSOC-> MLQ-P-> UWES-S	.04	[.01, .08]	.04	[.01, .09]	.01	[-.03, .84]	.04	[.01, .09]
LSOC -> MLQ-P ->Well-being-> UWES-S	.01	[.00, .03]	.01	[.00, .03]	.00	[-.03, .25]	.01	[.00, .03]
LSOC-> Well-being -> UWES-S	.11	[.06, .17]	.10	[.04, .16]	.04	[-.00, .09]	.10	[.05, .17]

Note. Bold fonts are the significant mediation paths.

Discussion

The present study investigated the associations of sense of community, presence of meaning in life, and subjective well-being in academic engagement. Specifically, we extended the literature by examining presence of meaning in life and subjective well-being as concurrent mediators of the association between sense of community and the facets of academic engagement as well as its total score.

First, we hypothesised that the dimensions of SoC would be positively associated with the facets of academic engagement and the sum scores of academic engagement. This hypothesis was partly supported by the results of this study given that learning SoC was significantly associated with the outcome variables, whereas social SoC was not. These findings were important in view of a previous study which reported that although social SoC in the seminary was weak, academic excellence in the seminary environment was relatively high (Chukwuorji, Ifeagwazi et al., 2018). SoC in the learning situation have been observed to be anchored on similarity of needs, importance of learning, recognition, friendship, connectedness, acceptance, thinking critically, safety, group identity, and absence of confusion (Rovai, 2002). These

attributes may be more relevant to academic-related outcomes than an exclusively socially-oriented SoC. Our study clarifies previous research (e.g., Juvonen et al., 2012; Tovar, 2013; Wang & Eccles, 2013; Wilson et al., 2015; Yilmaz et al., 2023) showing that the positive contributions of connectedness, relatedness, belongingness, and integration to student engagement are more effective when they are inclined towards the learning situation.

The second hypothesis, which stated that presence of meaning in life, would be positively associated with the facets of academic engagement and the sum scores of academic engagement was supported for vigour, dedication, and academic engagement total scores; but it was not supported for absorption. Previous research (e.g., Smithikrai et al., 2018; Yuen & Datu, 2021) which investigated meaning in life in relation to academic engagement have not explored the possible differences when the dimension of the engagement outcome is considered. Those who have understood themselves and the world may have high energy level, be more enthusiastic in meeting the challenges of pursuing academic tasks, rather than being carried away in the course of their studies.

The third prediction was that SWB would be positively associated with the facets of academic

engagement and the sum scores of academic engagement. There was support for this hypothesis for the facets of vigour, dedication, and overall academic engagement, but not absorption. Our finding is consistent with the literature which uphold that students' well-being may lead to proactive engagement in one's studies (Belfi et al., 2012; Buyse et al., 2009; Huo, 2022; Phan et al., 2016). For a student in the seminary to pursue intellectual accomplishments, he needs to be cognitively and affectively healthy. It is those who are mentally healthy that can effectively carry out any assigned academic task in the school.

The fourth hypothesis was that presence of meaning in life mediates the relationship between SoC dimensions and the facets of academic engagement including the sum scores of academic engagement. Some support was found for this expectation as presence of MIL mediated the effect of social SoC as well as learning SoC on vigour, dedication, and overall academic engagement, but such effect was not found for absorption. An understanding of the mediation of the SoC-academic engagement link may emanate from the contribution of SoC in making individuals to have feelings of self-confidence and control in the course of their educational activities.

Our fifth expectation was that subjective well-being would be a significant mediator of the relationship between SoC dimensions and the facets of academic engagement including the sum scores of academic engagement. This finding is consistent with findings of a similar study which reported that self-efficacy was a mechanism of influence between social self-efficacy and academic engagement (Phan et al., 2016). It is reasoned that SoC may make students increase students' striving, personal development, self-acceptance, autonomy, and positive interpersonal relationships, which in turn imbues them with sense of continued engagement in their academic work.

Lastly, we hypothesised that subjective well-being would be a pathway through which both sense of community dimensions and meaning in life impacts on the facets of academic engagement

including the sum scores of academic engagement (that is, double mediation pathway). Our findings in this regard were varied. Subjective well-being was a mediator for social and presence of MIL and to vigour, dedication and overall academic engagement, but not for absorption. The double mediation was not obtained for learning SoC.

It is important to understand the study in the context of a seminary as a religious school context. In many western countries, the seminary is a graduate school where people enroll as adults to be educated in theology as they prepare for priestly vocation. In Nigeria, adolescent boys have the option of going to the minor seminary for their secondary (middle and high) school education and they are taught all the subjects that are offered in a conventional secondary school. They write the same general high stakes examinations with students in other schools in their sixth year in the seminary. But in addition to these subjects, students in the minor seminary study additional religious courses and engage in routine religious practices. We view the results of our study in the light of the peculiar demands of the seminary training where students are expected to adhere to strict disciplinary measures and academic standards. To the extent that students in the seminary study the regular subjects as the students in the other regular secondary schools, they may have similar academic engagement. However, there may be variations in engagement when we consider the other religious aspects of their education and training which are mandatory. The seminary may also entail a certain higher level of sense of community than what is obtainable in conventional secondary schools because students in the minor seminary are away from their family for a longer period during the academic term. They live in the dormitories and are only allowed to travel home when there is an important reason to do so or during the holidays at the end of every term. A term usually lasts for about three months. These long periods of community life may confer a unique sense of bonding to the seminarians.

Limitations of the study and suggestions for further study

The first limitation of this study is the cross-sectional nature of the data collection and the use of self-report measures, which raises concerns about common-method variance. There is need for caution in drawing conclusions about causal relations among our variables. We recommend the adoption of longitudinal designs and if possible, experimental procedures that can enable causality to be established in research on academic outcomes. A similar study needs to be conducted in the context of public /secular schools also to establish the possible role that context plays in these results, as no generalization is possible from the current study. The possible mediating role of other eudaimonic, evaluative and hedonic well-being measures could be explored to deepen the understanding of mediational dynamics. Another limitation of the study is that that participants were only men and seminary students with special characteristics as religiosity and strict disciplinary measures. The results cannot be generalized to other samples of students and female samples.

Conclusion

Our findings imply that both components of the mediational pathway (meaning in life and subjective wellbeing), may independently serve as potential targets for improving academic vigour and dedication in academic work. However, it may be useful to target in particular subjective well-being, including both the affective (positive emotions) and cognitive (evaluative) components, as a mechanism to enhance academic engagement. This work contributes to the agenda for positive education by highlighting the importance of considering the pathways of relationships in engagement. We hope that the preliminary evidence of direct and indirect effects will stimulate further research that will inform positive actions to improve the wellbeing and learning outcomes of students.

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Conflict of interest/Ethical statement

The authors declare that there was no conflict of interest in the course of conducting this study. In addition, the authors ensured Privacy and confidentiality of data in the distribution and retrieval of the survey instrument. As such, before the collection of the data, the informed consent of the respondents was obtained and they were assured of their anonymity.

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