Learning Spirituality, Well-being and Organizational Citizenship Behavior on Learning Engagement with SDT

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Abstract

The surge in China's higher education has notably expanded university access, but has paradoxically lessened some students' learning commitment. However, this educational expansion has inadvertently led to a decrease in the overall commitment to learning among certain university students. This study aims to explore the factors influencing university students' learning engagement from the perspectives of spiritual learning, well-being, and organizational citizenship behavior, and establish a relevant relationship model using structural equation modeling. The data gathered from a cohort of 540 university students in Henan, China, was analyzed utilizing partial least squares-structural equation modeling (PLS-SEM). The results show that there is a positive relationship between learning spirituality and happiness ($\beta = .326$, $p = 4.912$), a positive relationship between learning spirituality and organizational citizenship behavior ($\beta = .429$, $p = 5.310$), a positive relationship between learning spirituality and learning engagement ($\beta = .627$, $p = 8.996$), a positive relationship between happiness and college students' organizational citizenship behavior ($\beta = .274$, $p = 4.111$), and a positive relationship between happiness and learning engagement ($\beta = .007$, $p = .154$). There is also a positive relationship between organizational citizenship behavior and learning engagement ($\beta = .265$, $p = 4.073$). Contributing to behavioral science, this research applies Self-determination theory, offering new insights into college student engagement and informing educational management. Future studies should investigate engagement mechanisms across various demographics and geographies to enhance student outcomes and experiences.

Keyword : Learning Spirituality; Well-being, Organizational Citizenship Behavior; PLS-SEM

Introduction

In recent years, with the implementation of the universal education policy in China, the number of college students has been increasing, and the overall education level has been improving. However, the problem of insufficient study engagement among some college students has gradually gained widespread attention. Study engagement refers to the positive attitude and level of participation demonstrated by students in the learning process, and it significantly impacts their academic performance and learning experience. However, some college students need more motivation, focus, and effective time management, which may hinder their academic and future career development(Zheng et al., 2022). Henan, one of China's most populous provinces, possesses abundant human resources but needs to catch up on economic development.

Meanwhile, the phenomenon of academic contest is widespread across various regions in China, and in Henan, being one of the heavily populated areas, students are engaging actively in various activities, actively studying or improving, in contrast to those who prefer a more comfortable and relaxed learning and living state. These two completely different learning states can be observed everywhere on college campuses. To effectively address this issue, conducting in-depth research on the influencing factors and mechanisms of college students' study engagement is necessary to develop corresponding educational and intervention strategies. Some recent studies have explored the impact of factors such as learning motivation, learning atmosphere, and education quality on study engagement. However, enhancing happiness, organizational citizenship behavior, and study engagement becomes crucial (Du et al., 2020). Academic contest manifests as the excessive involvement of college students in pursuing further education and job competition, which may significantly suppress their internal motivations, thereby affecting their learning and career development (Wang et al., 2022). Learning spirituality and happiness are considered essential components of individuals' inner experiences and are believed to play a crucial role in coping with stress and enhancing study engagement. Learning spirituality emphasizes the individual's intrinsic exploration and pursuit of knowledge and learning, while happiness is closely related to positive attitudes and psychological well-being(Fang et al., 2022). Additionally, organizational citizenship behavior, as a positive social behavior that includes participating in organizational affairs and making suggestions, may mediate between learning spirituality, happiness, and study engagement(Nehra, 2023; Wang et al., 2023).

The researcher believes that the spirituality of the learning environment is an essential factor in evaluating the connection between individuals and organizations, as well as its influence on college students' well-being, organizational citizenship behavior, and learning engagement. Paying attention to college students' spiritual learning and well-being is a recognition of individuals' perception abilities, while focusing on organizational citizenship behavior and learning engagement is a recognition of individual behaviors. Based on the self-determination theory, this study aims to investigate the impact of learning spirituality and well-being on college students' learning engagement in Henan Province and the mediating role of organizational citizenship behavior. By establishing a comprehensive research framework, we aim to uncover the potential mechanisms by which learning spirituality, well-being, and organizational citizenship behavior can alleviate the problem of excessive competition among college students and enhance their learning engagement. The study will provide and offer valuable theoretical guidance and practical initiatives for the comprehensive development of college students in Henan Province and also offer reference value for research on

college student issues in other regions and backgrounds.

Literature Review and Hypotheses Development

This section begins with a discussion of the self-determination theory used in this paper, followed by hypotheses to elucidate the relationship between the influence of learning spirituality, well-being on engagement in learning, and the mediating role of organizational citizenship behaviors.

The Self-determination Theory

Self-Determination Theory (SDT) is a psychological theory about human motivation, development, and well-being. The theory was proposed by psychologists Edward L. Deci and Richard M. Ryan in 1985 and aimed to explain the intrinsic and extrinsic factors behind individuals' motivations in pursuing goals, behavioral performance, and satisfaction(Deci & Ryan, 2013). Self-Determination Theory emphasizes the innate drives in humans for exploration, growth, and self-actualization while also considering the influence of the external environment on individuals' motivation and well-being. The core principles of Self-Determination Theory include three basic psychological needs: Autonomy (the need for individuals to pursue intrinsic motivation and make autonomous decisions), Relatedness (referring to the market for individuals to connect with others and receive social support), and Competence (the desire of individuals to experience competence and a sense of achievement in various activities and tasks)(Ryan & Deci, 2017). Self-Determination Theory suggests that meeting these basic psychological needs can stimulate intrinsic motivation, thereby supporting individuals in pursuing goals with greater motivation and persistence, improving work efficiency, enhancing learning interest,

and achieving higher levels of well-being in various domains(Ryan & Deci, 2017).

This study relates student engagement to Self-Determination Theory and focuses on first-year students in the Henan region. After experiencing three years of the COVID-19 pandemic in China, employment pressure and psychological stress have significantly increased. By applying Self-Determination Theory, we can gain a deeper understanding of first-year college students' autonomy, relatedness, and competence and how they influence their engagement in learning and psychological well-being. Through this research, we hope to provide valuable insights and recommendations for addressing current employment pressure and psychological stress, promoting the development of organizational citizenship behavior, student engagement, and well-being among college students.

Learning Spirituality (LS)

Spirituality is a multidimensional psychological phenomenon that involves an individual's experiences and cognition in surpassing material boundaries, seeking inner meaning, values, and connections. Despite various interpretations and definitions of spirituality in different cultures and disciplines, it generally emphasizes the depth of human experiences, links to the universe, and individual growth and meaning-making(Jones et al., 1986). Spirituality differs from religion, although they sometimes overlap; spirituality focuses on personal inner experiences and existential meaning, while religion emphasizes belief, ritual, and social community(Karakas, 2010). Learning spirituality refers to applying and extending the concept of spirituality in learning and education. It highlights the importance of intrinsic motivation, emotional experiences, and profound meaning in learning, emphasizing that learning is a crucial pathway

for individual inner growth and exploration(Miller et al., 2005). Learning spirituality involves how individuals develop inner awareness and consciousness, cultivate inner wisdom, explore the depth of knowledge, and connect learning with their inner selves and meaning(Smith, 2022). Learning spirituality includes four dimensions: intrinsic motivation and self-development, depth experience and flow state, construction of meaning and values, and individual growth and self-actualization (Saeed et al., 2022).

The relationship between the spirituality of learning environments and happiness has been a subject of research interest in psychology, particularly among college students. Learning spirituality emphasizes intrinsic motivation, emotional experiences, and a sense of meaning during the learning process, while happiness reflects an individual's subjective well-being and satisfaction. Learning spirituality emphasizes individuals' intrinsic drive and emotional experiences during the learning process, which can lead individuals to experience more autonomy, a sense of goal attainment, and emotional pleasure, thus enhancing their happiness(Nooripour et al., 2021). For example, intrinsic motivation promotes happiness: Learning spirituality emphasizes individuals' intrinsic motivation for learning, making individuals more focused, engaged, and satisfied with learning activities, thereby increasing their happiness (Deci & Ryan, 2013). Enhanced sense of meaning promotes happiness: Learning spirituality stresses deep understanding and meaning construction of knowledge, and this in-depth exploration and experience of learning can increase individuals' happiness by providing them with a greater sense of satisfaction and achievement (Seligman et al., 2005). Cultivation of positive emotions: Learning spirituality emphasizes the experience of positive emotions, which can help individuals cultivate more positive emotions such as happiness, interest, and pride, thereby enhancing their overall

happiness(Fredrickson, 2013; Moldavan et al., 2022). Therefore, this study proposes the following hypothesis:

H1: There is a positive relationship between the spirituality of learning environments and happiness.

The learning of spirituality emphasizes inner motivation, emotional experiences, and a sense of meaning during the learning process. At the same time, organizational citizenship behavior reflects individuals' positive behaviors and social responsibility. The spirituality of learning emphasizes individuals' intrinsic drive and emotional experiences during the learning process, and this positive attitude and knowledge of learning may extend to the organizational environment, prompting individuals to exhibit more citizenship behavior, such as assisting colleagues, providing support, and participating in administrative activities(Bohlmeijer et al., 2023). Previous literature has shown a positive relationship between learning spirituality and organizational citizenship behavior, primarily driven by intrinsic motivation and social responsibility. In other words, learning spirituality emphasizes intrinsic learning motivation and emotional experiences, and this inherent drive may inspire individuals to be more willing to contribute positively to the overall interests and development of the organization, exhibiting more citizenship behavior(Deci & Ryan, 1985). Secondly, a sense of meaning reinforces social involvement. Learning spirituality emphasizes a deep understanding of knowledge and the construction of purpose, and this profound learning experience may inspire individuals to pursue higher goals in the organizational environment, exhibiting more social involvement behavior(Al-Mahdy et al., 2022; Seligman et al., 2005). Finally, positive emotions are transmission. Learning spirituality emphasizes positive emotional experiences, enabling individuals to transmit more positive

emotions within the organization, enhancing cooperation and organizational culture among employees, and promoting citizenship behavior(Fredrickson, 2001). Based on the above literature, this study proposes:

H2: There is a positive relationship between the spirituality of learning environments and organizational citizenship behavior.

Learning spirituality emphasizes intrinsic motivation, emotional experience, and feelings of meaning in the learning process. In contrast, learning engagement reflects the degree of an individual's active involvement and participation in learning activities. Learning spirituality emphasizes intrinsic motivation, affective experience, and meaning construction, which can motivate individuals to be more focused, engaged, and involved in learning activities, thus enhancing their learning engagement(Khan et al., 2022). The positive relationship between learning spirituality and learning engagement may be explained in three ways: intrinsic motivation promotes learning engagement. Learning spirituality emphasizes inherent motivation to learn, and this drive may make individuals more willing to invest time and effort in deeper learning, thus increasing their learning engagement(Deci & Ryan, 1985). Secondly, feelings of meaning enhance learning engagement. Learning spirituality emphasizes deep understanding and meaning construction of knowledge, and this profound experience of learning may motivate individuals to seek more meaning and value in the learning process, thus enhancing the motivation of learning engagement(Ma & Wang, 2022; Seligman & Csikszentmihalyi, 2014). Finally, positive emotion development. Learning spirituality emphasizes positive emotional experiences, which can help individuals to develop more positive emotions such as interest, curiosity, and satisfaction, which in turn promotes individuals to experience more enjoyment and engagement in

learning(Fredrickson, 2001; Miles & Naumann, 2023). Based on the above literature, this researcher proposes the following:

H3: There is a positive relationship between learning spirituality and learning engagement.

Well-being（WB）

A sense of well-being is one of the essential dimensions in human psychological experience, encompassing individual subjective satisfaction and well-being with life. It reflects individuals' positive experiences at the psychological, emotional, and cognitive levels, including emotional pleasure, life satisfaction, self-identity, and positive evaluations of interpersonal and social relationships. Sense of happiness is a multidimensional concept, including two main dimensions of emotional well-being and life satisfaction and cognitive evaluations related to individual values, goals, and culture. In the study of personal mental health and happiness, a sense of well-being is widely used as an essential indicator to measure and understand the degree and quality of individual subjective well-being(Diener et al., 1999). Studying the sense of well-being and learning engagement among students at Henan University in China is a research topic of significant importance, especially in the context of increased employment and psychological pressures after experiencing three years of the pandemic(Rasmussen et al., 2022).

The sense of well-being reflects an individual's subjective happiness and satisfaction, while organizational citizenship behavior reflects an individual's positive behavior and social responsibility. Well-being may enhance an individual's psychological resources and positive emotions, stimulating them to be more willing to exhibit positive organizational behaviors, such as cooperation, support, and participation in corporate activities(Wang et al., 2021). The positive relationship between happiness and

organizational citizenship behavior can be explained in three aspects. Firstly, positive emotions promote citizenship behavior. Well-being is closely related to positive feelings, making individuals more willing to engage in organizational citizenship behaviors and showing more care, support, and cooperation, thereby contributing to organizational development and cohesion(Huang et al., 2021). Secondly, enhanced psychological resources foster a sense of social responsibility. Happiness can enhance an individual's psychological resources, such as self-esteem, optimism, and self-efficacy. It may stimulate individuals to be more willing to assume social responsibility in the organization and exhibit more citizenship behaviors (Bakker & Demerouti, 2008). Lastly, subjective happiness enhances organizational identification. Well-being can improve an individual's sense of identification and belonging to the organization, motivating individuals to actively participate in corporate activities and exhibit more citizenship behaviors, thereby enhancing organizational cohesion and social influence(Eisenberger et al., 2001). Based on the above literature, this study proposes:

H4: There is a positive relationship between well-being and organizational citizenship behavior among university students.

Well-being reflects an individual's subjective happiness and satisfaction, while engagement in learning demonstrates an individual's active engagement and participation in learning activities. There is a correlation between well-being and learning engagement. Well-being can motivate individuals to be more willing to invest energy and time in learning and show higher levels of learning engagement by enhancing their positive emotions, satisfaction, and enjoyment(Seligman et al., 2005). The positive relationship between well-being and learning engagement may be explained in three ways: firstly, positive emotions promote learning engagement. Well-being is closely related to positive feelings, which can motivate individuals to be more willing to invest time and energy in learning and increase their interest and engagement in learning activities(Petillion & McNeil, 2020). Secondly, satisfaction enhances the learning experience. Happiness is closely linked to pleasure, and an individual's joy in learning enhances their commitment to education, thus increasing learning engagement(Pietarinen et al., 2014). Finally, optimism drives learning engagement. Happiness is closely associated with optimism, which can motivate individuals to face learning challenges and difficulties more positively and show higher attitudes toward meeting learning(Heo et al., 2022; Upadyaya & Salmela-Aro, 2013). For example, Butt et al. (2020) proposed that students' engagement in learning is significantly positively correlated with life satisfaction and positive affect. They are significantly negatively associated with negative affect, which means that the more positively students evaluate and experience their lives, the more confident they feel about improving their abilities and task completion, resulting in a higher level of engagement in learning(Butt et al., 2020). Therefore, this study proposes the following:

H5: There is a positive relationship between well-being and learning engagement.

Organization Citizenship Behavior (OCB)

Organizational Citizenship Behavior (OCB) refers to the voluntary behavior of employees beyond their formal job responsibilities in a work environment to contribute positively to the overall interests and development of the organization. These behaviors are typically not explicitly stated in employment contracts or formal job duties, but they positively impact the organization's functioning and performance. Organizational citizenship behaviors include actions such as

helping colleagues, actively participating in administrative activities, providing constructive suggestions, and actively supporting change, reflecting employees' sense of social responsibility, cooperation, and loyalty to the organization(Podsakoff et al., 2000; Podsakoff & Organ, 1986).

Organizational citizenship behavior reflects an individual's positive behavior and sense of social responsibility in an organization. In contrast, engagement in learning demonstrates an individual's positive attitude and level of participation in the learning process. Research has shown a positive association between organizational citizenship behavior and learning engagement among university students. Organizational citizenship behaviors may increase engagement and participation in learning by enhancing their sense of social responsibility and positive organizational behaviors (Podsakoff et al., 2000; Zhang & Farndale, 2022). The positive relationship between organizational citizenship behaviors and learning engagement among university students may be explained by three aspects: firstly, social responsibility promotes learning engagement. Organizational citizenship behaviors reflect an individual's sense of social responsibility in the organization, which may extend to the individual's learning process, motivating the individual to be more willing to invest energy and time in learning and to show higher attitudes towards learning engagement (Soelton, 2023). Secondly, collaborative behaviors prompt learning engagement. Organizational citizenship behaviors include behaviors such as assisting colleagues and supporting others. This collaborative spirit may motivate individuals to be more willing to collaborate and share knowledge with others in learning, thus increasing learning engagement (Podsakoff et al., 2014). Finally, organizational identification strengthens learning engagement: organizational citizenship behaviors may

enhance individuals' identification with the organization, which may translate into positive attitudes and engagement in learning, thus enhancing learning engagement (Sun & Yoon, 2022). Synthesizing the above literature, the following hypotheses are proposed in this study:

H6: There is a positive relationship between organizational citizenship behavior and learning engagement among university students.

Learning Engagement (LE)

Learning Engagement refers to the degree of active involvement and participation displayed by individuals in learning activities. It encompasses cognitive aspects such as attention focus, deep-level thinking, knowledge accumulation, and affective elements such as interest in learning, self-efficacy, and emotional investment. Learning engagement emphasizes individuals' autonomy, intrinsic motivation, and emotional experiences in the learning process, essential in promoting learning quality, facilitating learning outcomes, and satisfaction (Fredrickson, 2013). Applying the concept of learning engagement to investigating the learning spirituality, well-being, and organizational citizenship behavior of university students in Henan, China, this study aids in understanding the interrelationship among these variables. Firstly, high levels of learning Engagement enhance individuals' positive experiences and self-growth during the learning process, thereby increasing well-being.

Furthermore, learning engagement may further cultivate and experience learning spirituality through fostering knowledge exploration, meaning construction, and self-actualization(Deci & Ryan, 2013; Pelealu, 2022). Lastly, examining the relationship between learning Engagement and learning spirituality, well-being, and organizational citizenship behavior assists in revealing students' psychological states, behavioral characteristics, and social interactions during

the learning process (Jobbehdar Nourafkan et al., 2023). Given the background of increased employment and psychological pressure faced by university students in Henan, China, focusing on their learning engagement significantly enhances learning quality, promotes well-being, and fosters social responsibility. It also provides empirical support for formulating educational and psychological intervention strategies.

Marital Status

Based on the above theoretical assumptions, this study constructed a structural equation model of the impact of university students' learning spirituality, well-being, and organizational citizenship behaviors on learning engagement, as shown in Figure 1.

Figure1 Model of the measurement

Method

Sample and Data Collection

This study collected data through an online questionnaire survey, as this method has advantages over other methods. Online surveys allow for the collection of large amounts of data, thus avoiding the need for data entry and processing. Online data collection also ensures the integrity of the data throughout the survey process (Shiau et al., 2019). The target respondents of this study were freshmen at privately funded universities in Henan, China, with student enrollments ranging from 10,000 to 30,000. The survey links explaining the purpose of the study were sent to relevant students through WeChat and responsible teachers. The questionnaire was distributed between May 15th and June 1st, 2023, during the revision phase before the final exams of the academic year. Participation in the survey was voluntary. After deleting some disqualified questionnaires in SPSS, 540 valid questionnaires were collected. According to the sample size standards, the collected sample for this study is sufficient to meet the research objectives [61]. It is necessary to note that before students completed the questionnaire, the researchers introduced the main content to ensure their understanding of relevant terms. The questionnaire consisted of two parts: the first part included demographic information,

and the second part included detailed questions about the variables in the model.

Among the 540 respondents, 55% were male, and 45% were female. Regarding the place of origin, 70% of the students were from rural areas, 25% were from urban areas, and 5% were from suburban areas. Regarding majors, 70% were in STEM fields, 20% were in humanities, and 10% were in arts.

Measurements

Drawing fully on previous research while meeting the requirement of at least three items per construct for structural equation modeling (Hair et al., 2019), each construct in this study had four or more measurement items, and all the scales in this study used a 7-point Likert scale, (1 = "strongly disagree," 7 = "strongly agree"). The questionnaire was written in Chinese as the respondents were all students at a Chinese university, and ample time was allowed for the respondents to complete the questionnaire. The Learning Spirituality consists of eleven questions, such as "I can experience fun in learning," "I feel part of a school team," and "I feel connected to the development of the school," based on the maturity scale developed by Deb et al. (2020) based on the maturity scale developed by Deb et al., (Deb et al., 2020). Well-being consists of four second-order variables: 'Subjective well-being,' 'Life satisfaction,' 'Healthy well-being,' and 'Healthy well-being.' well-being", "Healthy well-being," and "Social well-being," a total of 20 questions based on the OECD (2020) scale(OECD, 2019). Organizational citizenship behavior of university students contains ten questions, such as "I will take the initiative to do the work that is required of me," "I get along well with my teachers," etc., based on Jiing-Lih Fath et al. (2004) scale(Farh et al., 2004).

Finally, Learning Engagement is based on Arne et al. (2017) scale with four questions(Arne Heyen et al., 2017).

Ethical Considerations

This research project was approved by the Academic Committee on Ethics, Zhengzhou Technology and Business University on 7 August 2023(Approval Code: ACE ZTBU20230005)

Results

Common Method Bias

Common methodological bias is one of the main concerns of this cross-sectional study, especially when collecting questionnaire data from a single source (i.e., expatriates only). As this potential problem needs to be given high priority, Harman's one-factor approach was used to address this issue (Podsakoff et al., 2003). The results showed that the first factor explained 27.48 per cent (less than 50 per cent) of the variance; therefore, common method bias was not a serious problem in this study.

Analytical Method

For the current study, Smart-PLS software was utilized to conduct partial least squares structural equation modeling (PLS-SEM). PLS-SEM is a variance-based approach within the SEM framework and is well-suited for assessing models with limited theoretical support(Hair et al., 2019). Furthermore, PLS-SEM is particularly suitable for analyzing intricate models involving multiple moderators(Shiau & Huang, 2023). Considering that this study's hypotheses incorporated moderators related to a novel phenomenon, PLS-SEM was considered a suitable method for data analysis.

Outer model and scale validation

Partial least squares (PLS) analysis and

estimation were performed with two phases. The first phase conducted reliability and validity analyses, whereas the second phase estimated and verified the path coefficients and explanatory power of the structural model. The purpose of the above two phases was to confirm whether the constructs were reliable and valid, thus verifying the relationships between constructs (Hulland, 1999). This study used the Smart-PLS (Version 3.2.7) developed by Sarstedt and Cheah (2019).

The external model for this study was assessed through the following metrics: internal consistency and reliability of each item, convergent and discriminant validity of each construct, and severity of standard method variance (CMV). The values of Cronbach's alpha, composite reliability, and average variance extracted (AVE) are presented in Table 2. Hair et al. (2021) suggested assessing the constructs' reliability by examining Cronbach's

alpha and composite reliability. The convergent validity of a construct refers to the degree of correlation between the measurements of two theoretically connected constructs(Hair et al., 2021). As can be seen in Table 1, Cronbach's alpha values ranged between 0.858 and 0.959, which exceeds the recommended threshold of 0.7—indicating that they are acceptable(Chin, 1998).

The final step of measuring the model is to identify discriminant validity by comparing the correlations among constructs via the Heterotrait-Monotrait ratio of correlations (HTMT) method. Given that HTMT values should be lower than .90(Henseler et al., 2015), the corresponding values for all the constructs indicated satisfactory discriminant validity (refer to Table 2).

Table 1

Internal Reliability and Convergent Validity Results

Variables	Cronbach'α	rho_A	CR	AVE
Learning Spirituality	0.957	0.958	0.963	0.724
Well-being	0.952	0.954	0.957	0.570
Organization Citizenship Behavior	0.957	0.958	0.963	0.742
Learning Engagement	0.959	0.959	0.970	0.891

According to the results of the statistical analysis in Table 2, it can be found that the square root of AVE compared with the correlation coefficient of Well-being AVE is 0.755, but it is acceptable. The overall result is better. It indicates that the scale has good differential validity.

Table 2

Distinct Validity

Factors	1	2	3	4
1 Organization Citizenship Behavior	**0.861**			
2 Learning Spirituality	0.794	**0.851**		
3 Well-being	0.762	0.680	**0.755**	
4 Learning Engagement	0.762	0.841	0.635	0.944

Inner model and hypotheses testing

In the evaluation of the structural model, the bootstrapping re-sampling technique (1,000 resamples) was employed to analyze the causal connections among variables. Prior to examining the moderating influences, the initial stage of the assessment involved validating the direct link between perceived non-work constraints and withdrawal intention. Table 3 and Fig. 2 presented that social media marketing activities positively and significantly affected social identification, supporting H1 and H2 (LSP →WB: β = 0.326, t-value = 4.912; LSP→ OCBs: β = 0,429, t-value = 5.310). So, Learning Place Spirituality has positive relationship on Well-Being and student organization citizenship behavior; H3, H4,H5, H6(LSP → LE: β = 0.627, t-value = 8.996; WB →OCBs : β = 0.274, t-value = 4.111; OCBs →LE: β = 0.007, t-value = 0.154 ; OCBs →LE β = 0.265, t-value = 4.073 ）, meaning that this four groups of coefficients show that there is an obvious positive relationship between the two variable.

Table 3
Structural Model Assessment Results

Hypothesis	Path coefficient	t-Value	Result
H1: LSP □ WB	0.326***	4.912	Supported
H2: LSP□ OCBs	0.429***	5.310	Supported
H3: LSP □ LE	0.627***	8.996	Supported
H4: WB □ OCBs	0.274***	4.111	Supported
H5: WB □LE	0.007*	0.154	Supported
H6: OCBs □ LE	0.265***	4.073	Supported

Note 1: LSP=Learning Place Spirituality; WB=Well-Being; OCBs=student organization citizenship behavior; LE=Learning engagement

Note 2: * p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001.

Note 3: Number of bootstrap samples = 1000
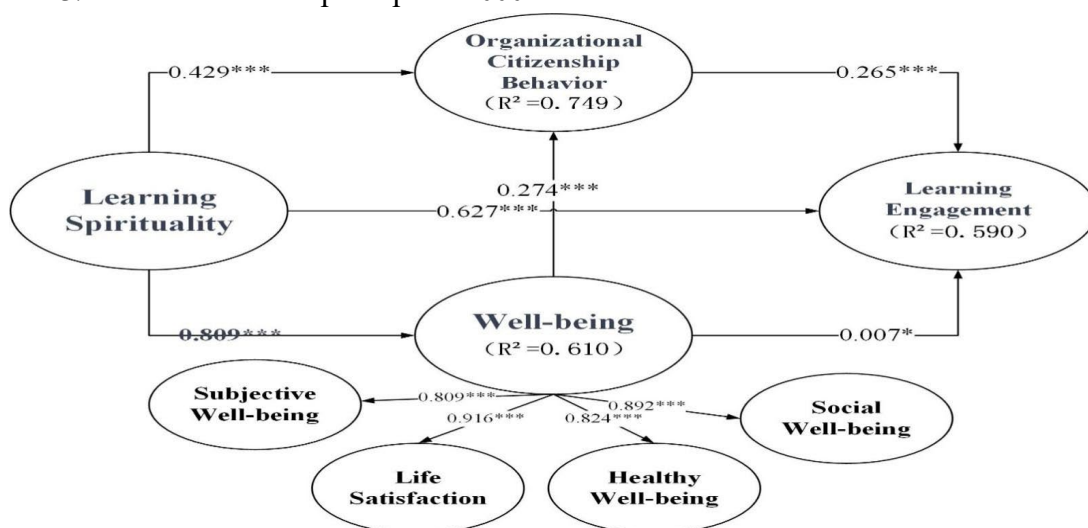
Notes: **P-value<0.01, ***P-value<0.001.

Figure 2
Structural Equation Modelling Results

Discussion

To begin with, it was found that spirituality in learning environments positively impacts learning engagement, with happiness and organizational citizenship behavior acting as mediating variables in this process. Hypotheses 1, 2, and 3 are all supported. It is consistent with previous research findings(Hashemi et al., 2020) and supports the view that spirituality influences well-being, organizational citizenship behavior, and learning engagement in learning environments. Moreover, previous researchers have believed that individuals' happiness is positively related to organizational citizenship behavior and work engagement(Belwalkar et al., 2018). Some researchers also suggested that components of happiness (i.e., life satisfaction and emotional balance) mediate the relationship between resilience, organizational citizenship behavior, and work engagement(Paul & Elder, 2019) In our study, the four dimensions of happiness among college students positively relate to organizational citizenship behavior, supporting hypotheses 4 and 5 and aligning with previous literature reports. Several researchers have also proposed a positive relationship between organizational citizenship behavior and employee engagement and job performance. It is consistent with our hypothesis 6, which suggests a positive relationship between college students' organizational citizenship behavior and learning engagement. Self-determination theory supports the connections between happiness, organizational citizenship behavior, and learning engagement, confirming hypotheses 4, 5, and 6.

This study deepened the understanding of Chinese Henan University students' learning engagement and revealed the positive role of learning spirituality, well-being, and organizational citizenship behavior. It empirically supports education and psychological interventions, helping college students cope with post-pandemic challenges and employment pressure.

Implications for Behavioral Science

Based on the proposed model in the current study, there are several implications for college students to enhance their engagement in learning. College students are in an essential period of self-physical and mental development, and the formation of their outlook on life, and it is of great significance to pay attention to the inspiration of college students' learning places, enhancement of well-being, and organizational citizenship behavior:

The motivation to society: the values of college students are forming and are easily influenced by external factors. We call on the relevant educational management authorities to pay attention to the differences in students' inspiration for learning, guide them to recognize their strengths and weaknesses, and take measures to enhance students' sense of well-being.

For the school: the university period is a critical period for the formation of college students' values, and the school, as the central unit of college students' education, needs to guide college students to participate in clubs, deal with the relationship with teachers and classmates to promote the students' sense of responsibility and happiness, etc., and also to guide college students to set up the consciousness of serving for the country and others, to strengthen the college student's sense of responsibility and the spirit of dedication.

The students themselves need to learn to recognize the differences in their personalities and learning aptitudes, acknowledge their strengths and weaknesses,

enhance their inner sense of well-being, establish a sense of responsibility for the country and society, and enhance their commitment to learning, to enrich their growth with knowledge, so that they can become more valuable human resource.

Limitations and Future Directions

Despite The limitations of this study are manifested in the following four aspects. Firstly, the data collected in this study are from Chinese university students. Given that research on the happiness, organizational citizenship behavior, and learning engagement of university students exists worldwide, the ability to understand this global phenomenon is limited based on data from more than one country. Therefore, future researchers can conduct comparative studies on learning engagement across different countries. Secondly, due to the cross-sectional nature of the survey data, we cannot confirm the causal relationships between the variables being examined. Therefore, we recommend that researchers adopt longitudinal designs to collect data and test the hypothesized causal effects in the model. Thirdly, the data collected through questionnaire surveys have certain limitations as they only reflect the self-perception of the respondents at a particular stage, and the results may vary at different locations.

Conclusion

In conclusion, the present study assessed associations between Learning Engagement and two behaviors (i.e., SW and OCB) among Chinese university students. SW as a mediator between Learning Place Spirituality, OCB and Learning Engagement. our study contributes to the extant research in several ways. Firstly, the research explains the relationship between the spiritual atmosphere of learning environments and

happiness, organizational citizenship behavior, and learning engagement within the framework of self-determination theory. Additionally, it examines the relationship between well-being and organizational citizenship behavior and the relationship between organizational citizenship behavior and learning. Using Smart-PLS 3.0, we determined the relationship coefficients of the relevant variables and developed a model. This research provides a theoretical basis for studying spirituality in educational settings for the Ministry of Social Education, school administrators, teachers, and students. It also offers actionable methods for enhancing student learning engagement.

Acknowledgement

Data Sharing Statement

The data used to support the findings of this study are available from the corresponding author upon request.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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