

Article

Beyond Travel Decisions: How Travel Intention Shapes Student Mental Health Through Social and Behavioral Pathways

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Abstract

This paper examines how the travel intention of students is correlated with their mental health, in terms of stress reduction and psychological wellbeing. The study employs a combined model that integrates the Theory of Planned Behavior and Stress Recovery Theory to determine the role of travel intention. Travel self-efficacy, the pressure of social influence, the value of the travel experience, the perception of affordability, and the attitude towards tourism determines travel intention, leading to stress reduction and psychological wellbeing of students. The paper examines the mediating capacities of travel involvement and social connectedness and the moderating capacities of nature connectedness and travel frequency. Semi-structured interviews with 15 university students and a survey among 604 students in various universities in Bangladesh were used to collect data. Hypotheses were tested using PLS-SEM. Findings indicate that travel intention enhances psychological wellbeing and reduces stress, and travel involvement and social connectedness are important mediators. These relations are mediated by nature connectedness and frequency of travel, which increases the restorative effect of travel. The results indicate that tourism could be a viable approach to student mental health promotion, which has both practical and theoretical consequences on university policy and future tourism psychological studies.

Keywords: travel intention; student's mental health; theory of planned behavior; social connectedness; travel self-efficacy



Academic Editors: Andjelija Ivkov
Dzigurski and Igor Stamenkovic

Received: 6 June 2026

Revised: 11 July 2026

Accepted: 16 July 2026

Published: 26 July 2026

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1. Introduction

University students throughout academic life face different life stages, which include maintaining academic consistency and securing social identity. At the same time, students get prepared for handling financial pressures and uncertain employment over the years. A lot of students face challenges while meeting these coinciding demands and fail to maintain emotional stability and overall mental wellbeing in the long run. While professional counseling services are essential to psychological wellbeing, there are different lifestyle experiences that can eventually lead to a stress-relieving situation. In recent times, tourism has gained enormous popularity in terms of ensuring mental recovery. Tourism is considered a meaningful and experiential activity that is certainly capable of promoting mental wellbeing.

Traveling sets an opportunity for individuals to step out from their own comfort zones and breaks the everyday monotonous life routine. One can immerse themselves

in new settings to explore themselves in different physical and social contexts. These sorts of changes enable people to stimulate positive emotions that can lessen habitual stress patterns and give a fresh perspective on life. Existing studies show how traveling can improve the emotional and experiential opportunities that can lead to happiness and eventually ultimate life satisfaction (Nawijn & Strijbosch, 2021; Su et al., 2021). According to Filep and Laing (2018), tourism is not only considered as a form of refreshment but also gives opportunity for personal growth and self-reflection by enhancing self-worth and positive life engagement. Altogether, these thoughts suggest tourism builds experience and enhances mental health, particularly among people who are consistently facing stress.

Tourism has been widely recognized as an activity that contributes to psychological wellbeing, personal development, and social connectedness, but participation in tourism experiences is not equally accessible to all individuals. Travel decisions and opportunities are influenced by various structural and personal constraints. Those consist of financial limitations due to different socioeconomic backgrounds, lack of time for travel, family responsibilities and burdens, safety concerns, especially those based on gender, and social expectations (Crawford & Godbey, 1987; Nyaupane & Andereck, 2007). For that reason, tourism experiences should not be considered entirely available or beneficial without considering the socioeconomic and cultural conditions of each individual person.

Specifically, university students' travel behaviors may be influenced by their economic capacity, family support, cultural values they cherish, and gender-related flexibility restrictions. Previous studies have highlighted that women and individuals from disadvantaged socioeconomic backgrounds may experience greater barriers to leisure travel due to family obligations and responsibilities, social norms, and limited resources (Khan, 2011; Nyaupane & Andereck, 2007). Also, student travelers may encounter specific problems such as parental concerns on safety and security and affordability issues for tour budgets. These can affect their travel participation and experiences (S. A. Cohen et al., 2014). Therefore, while tourism may contribute positively to wellbeing, benefits should be interpreted within broader social and structural contexts as well.

The COVID-19 pandemic and associated global disturbance further points to the importance of tourism and its psychological significance in the long term. During COVID-19, people underwent social isolation and restriction in mobility, which afterwards increased emotional turmoil and resulted in significant stress. As stated by Gössling et al. (2021), during lockdown the restrictions on mobility and leisure activities and enclosed environmental restrictions created severe mental turmoil. Tourism here pressed a point for emotional renewal and recovery by environmental change. In the post-pandemic context, students whose academic and social routines were disrupted embraced travel as a restorative aspect. However, despite the multiple benefits of tourism in wellbeing there are limited studies that have found motivational drivers in tourism.

To better understand these relationships, the present study integrates two theories, the Theory of Planned Behavior (TPB) and the Stress Recovery Theory (SRT). How individuals engage in different behaviors depending on their attitudes, perceived social expectations, and perceived behavioral control is rigorously demonstrated with the TPB. Within tourism research, this framework has effectively predicted various forms of travel intention. This includes wellness- and sustainability-related travel behaviors (Chuang et al., 2018; Do & Nguyen, 2025). When students perceive travel as feasible, socially supported, and psychologically beneficial, they are more likely to practice strong intentions to participate in traveling, which is also associated with improved mental health and a strategy for coping with stress.

The TPB clarifies individual intentions to travel but it does not express how travel experiences can restore emotional aspects. The SRT adds to the TPB by adding the experi-

ence of healing environments, especially in natural environments that facilitate emotional recovery from stress. Empirical studies showed that nature-based tourism experiences are associated with reduced stress and enhanced wellbeing (Qiu et al., 2020). Students who come across natural environments and immersive environments may therefore be provided with meaningful stress relief.

From an integrative point of view, travel intention can lead to positive mental health outcomes by travel involvement and travel experience. Travel involvement means the degree of personal engagement and relevance individuals express while travel planning and participation. Students with travel experience are more likely to invest in cognitive energy. Travel involvement can act as a mediating link between intention and psychological outcomes. Additionally, planning trips, sharing expectations, and experiencing destinations with others can strengthen interpersonal bonds and foster a sense of belonging. Su et al. (2023) demonstrates that social interaction during travel significantly enhances subjective wellbeing. University students in daily life are closely related to their peer groups, and intention to travel can enhance their social connectedness while contributing to stress reduction and mental wellbeing at the same time.

Individual characteristics may further influence the magnitude of tourism and its healing effects. Nature connectedness is defined as an individual emotional attachment to the natural environment that may intensify psychological benefits. Additionally, the frequency of travel participation may shape wellbeing outcomes, where regular engagement in travel could produce increasing restorative benefits. At the same time, repeated exposure may also modify the perceived intensity of each experience of traveling. Although research increasingly supports associations between tourism and wellbeing, there are limited studies directly on university students. In Bangladesh, university students' travel decisions are influenced by factors such as affordability, family support, gender norms, and safety security concerns. Most students prefer domestic travel because it is more affordable and accessible. Therefore, this study is based on Bangladeshi students to gain a better understanding of their travel intention. By combining motivational and restorative perspectives, this study develops an integrated framework that explains how travel intention could influence student mental health in both direct and indirect ways. At the same time, it accounts for moderating influences of nature connectedness and travel frequency.

Although the present study primarily examines the positive psychological outcomes of travel, it is acknowledged that travel may not always produce beneficial effects. Students may experience travel-related stress due to financial constraints, academic responsibilities, time limitations, safety concerns, peer pressure, or limited family support. These challenges may reduce the restorative benefits of travel and influence the extent to which travel intention contributes to improved mental health. Nevertheless, this study focuses on the positive pathways proposed by the integrated theoretical framework while recognizing that these contextual barriers may shape travel experiences and their psychological outcomes.

This study also contributes to the understanding of tourism as an experience-based resource for psychological wellbeing while offering a practical implication for higher education institutions and policy-makers. This is in conjunction with promoting innovative strategies to enhance student mental wellbeing by stimulating enriching experiences beyond the classroom environment.

2. Literature Review

2.1. Underpinning Theory

This study blends the Theory of Planned Behavior and the Stress Reduction Theory to explain not only the formation of the travel intention but also the role of travel experiences in enhancing the mental health of students by engaging in behavioral activities and restoring

their psychology. Human behavior is one of the most complicated terms to understand. Different theories and concepts have developed over time to explore and grasp the influence of behavior (Ajzen, 1991). Here, attitude refers to the positive and negative approach of certain behavior and its appeal in building behavioral beliefs (Hüsser & Ohnmacht, 2023; Rhodes & Courneya, 2003). In this article students' attitude towards tourism is influenced by their beliefs on stress reduction and psychological wellbeing. Subjective norms indicate the impact of an individual's response to certain important referent groups like family, friends, and peers. Students are greatly affected by peer group pressure (Duffy, 2015). Perceived behavioral control is closely related to behavioral intention and actual behavior, which reflects similarities with self-efficacy. This study intends to relate the factors of the TPB to analyze the influence of tourism on students' psychological wellbeing and stress reduction. Here, along with the TPB, some other elements from the Stress Recovery Theory (SRT) have been included to get a broader perspective. Originally developed by Ulrich (1983), the SRT explores the importance of restorative environment in physiological and psychological stress reduction (Ulrich et al., 1991). This theory has been extensively applied in prime journals in the field of tourism like *Tourism Management* and the *Journal of Travel Research*, explaining how attitudes, social norms and perceived behavior control and influence travel intention and subsequent travel behavior (Reza Jalilvand & Samiei, 2012). This theory depicts that aesthetically beautiful and nature-oriented destinations trigger positive emotions and lessen stress. This is a relatively fast recovery process that is beneficial in terms of mood, anxiety, and psychological wellbeing. Nature connectedness can enhance this restorative effect, but the beneficial effect may be enhanced by extensive traveling due to repeated exposure to the conditions that relax them. Tourism can be a good coping strategy, as students often feel a great deal of academic pressure and mental stress, which is why they should have an opportunity to relax and recover (Lin & Yang, 2024). Thus, students who go on a trip and actively engage in the experience, especially in natural environments, have more chances to feel relieved of stress and emotionally replenished. This restorative effect can be reinforced by nature connectedness, whereas the positive impact might be reinforced by extensive travel because of repeated exposure to relaxing conditions.

This study integrates the Theory of Planned Behavior (TPB) and Stress Recovery Theory (SRT) to provide a comprehensive explanation of students' travel behavior and mental health. Rather than treating the Theory of Planned Behavior (TPB) and Stress Recovery Theory (SRT) as independent perspectives, this study integrates them into a sequential explanatory framework. The TPB explains the cognitive and motivational processes through which favorable attitudes, perceived social influence, and travel self-efficacy shape students' travel intention. The SRT complements this perspective by explaining how engagement in travel experiences contributes to psychological restoration through enhanced social connectedness, reduced stress, and improved psychological wellbeing. Consequently, the TPB explains why students intend to travel, whereas the SRT explains how those intentions are translated into psychological outcomes. This integrated perspective provides a coherent theoretical mechanism linking travel-related decision-making with mental health outcomes rather than viewing the relationships as isolated positive associations. By combining these theories, the proposed framework extends beyond predicting travel intention and explains how travel intention translates into improved student mental health through mediating and moderating mechanisms. This integration offers a more holistic understanding of the behavioral and psychological processes underlying travel-related wellbeing.

2.2. Hypothesis Development

H1. *Travel intention has a positive relation with students' mental health.*

The World Health Organization defines mental health as a state of wellbeing and as a multidimensional entity that involves emotional, psychological, cognitive, social and behavioral dimensions (Agaibi & Wilson, 2005). The multidimensionality of mental health does not allow all its aspects to be studied here. For this reason, this study approaches student mental health in the context of students' mental health and psychological wellbeing but recognizes the significance of other aspects of mental health like anxiety, depression, academic burnout, mindfulness, social connectedness and psychological distress.

Students are often prone to various sources of stressors, such as academic, financial and social ones, which lead to an increased amount of stress and emotional exhaustion. The desire to travel can be viewed as a type of coping mechanism, since it offers students a perceived possibility of relaxing, recovering and having time to be off routine activities (Zhu et al., 2020). Existing research on tourism has demonstrated that positive anticipation of tourism experiences has the potential to improve subjective wellbeing, as people can get emotional rewards as well as psychological relief while planning an upcoming trip even when the trip has not started (Busser & Shulga, 2026; Nawijn & Filep, 2016). Students with higher intentions to travel will have a better mental health outcome since the cognitive and emotional activities during the anticipation of the traveling process help in reducing stress and creating a positive mood and psychological stability.

On negative aspects, if students have a strong intention to travel but for various reasons (e.g., financial circumstances, outside circumstances) are unable to travel, this may increase stress and make a negative impact on the student's psychological state. Tourism can therefore be a reverse therapeutic process, as touristic desires become frustrated into a negative psychological effect (Nawijn & Biran, 2019). More recent research indicates that future-oriented leisure intentions can be linked to enhanced emotional regulation and life satisfaction because they develop a sense of control over leisure life and future experiences (Dolnicar et al., 2013). There is an increasing amount of research being done on wellbeing in relation to hospitality and tourism (Bohon et al., 2016; Joseph Sirgy, 2019).

H2. *Travel intention has a positive relation with travel involvement.*

Travel involvement includes students' interest in planning, initiating and organizing the tour. Here, according to the TPB, students' involvement in the tour largely depends on their attitude towards their intention, perceived value and attitude (Esfandiar & Hadinejad, 2025). Studies on wellness tourism explore that tourism decision-making impacts tourists' motivation and psychological engagement (Gan et al., 2023). Studies related to the extended Theory of Planned Behavior show that tourism motivation, value perception, and lifestyle changes impact visit intention and behavioral involvement. This also reflects how intention can be converted to more profound travel participation (Subawa et al., 2024). Moreover, risks and emotions mediate the link between intention and involvement (Güneş & Basgoze, 2024).

H3. *Travel involvement has a positive relation with students' mental health.*

Students face huge pressure with their academic and personal life while continuously being stressed over academic results, future career and changing atmosphere of their personal life. It is essential for students to take care of their mental wellbeing while dealing with their everyday battles. Studies related to mindfulness show that there is an optimistic association between psychological wellbeing, travel and mindfulness, as they reflect that adapting mindfulness increases tourists' satisfaction and pro-environmental behavior (Iacob et al., 2024). Therapeutic excursions exhibit a higher level of efficiency in anxiety reduction and energy restoration, which eventually helps to fight against depression

([Huang et al., 2025](#); [Zhong et al., 2025](#)). Expeditions give students the opportunity to relax and unwind from the tension that affects their psychological wellbeing. The literature related to systematic tourism wellbeing manifests a strong relationship between a good tour experience and quality of life ([Konstantopoulou et al., 2024](#)).

H4. *Travel intention has a positive relation with social connectedness.*

The connection between travel intention and social engagement is yet to be discovered. There are very few articles where this association has been discussed. Studies have shown that tourism, more specifically nature-based travel, drives a positive influence on social connectedness ([Diallo et al., 2022](#); [Y. Lee et al., 2019](#)). When students intend to visit somewhere as an excursion, they automatically develop a social group where they build a common connection. Strong intention is often associated with the desire to plan for a shared tour experience, which often leads to strong social ties ([T. E. Li & Chan, 2021](#)). Students expect to have a social bond during the time of their outing and try to relate themselves with involved groups. Studies have shown that after COVID-19, the motive to travel significantly included the influence of social connectedness and psychological wellbeing ([Aebli et al., 2022](#)).

H5. *Social connectedness has a positive relation with students' mental health.*

Social connectedness is a powerful indicator of the mental health of students. The sense of connectedness brings about emotional support, lessens loneliness, and improves a sense of belongingness, which are core issues in mental wellbeing. Research shows that students' integrative wellbeing depends on tourism, where integration indicates the overall wellness of their emotional, social and quality of life ([Qu et al., 2025](#)). Interactions during a trip bring happiness, resilience and increase satisfaction levels, particularly for young people. Students who get the opportunity to unwind themselves through leisure activities, site-seeing and travel experience less stress and anxiety compared to others ([Konstantopoulou et al., 2024](#); [Nawijn & Filep, 2016](#)).

Financial, social or cultural factors may prevent students from traveling, which can negatively affect the pressure they feel from their peers and the social comparisons and stereotyping they encounter ([Siegel & Wang, 2019](#)). Public health researchers have proven that social connectedness protects adults from anxiety and depression, which subsequently leads to a good wellness state, especially due to anxiety developed after COVID-19 ([Hüsser & Ohnmacht, 2023](#); [Wickramaratne et al., 2022](#)).

H6. *Nature connectedness plays a moderating role in travel intention and student's mental health.*

Nature connectedness determines the extent to which travel intention impacts mental health since people who have a stronger emotional attachment to the natural environment get more restorative value in expectations associated with travel. Exposure to natural environments and nature-based tourism improves the recovery of stress, emotional renewal, and psychological wellbeing ([Buckley et al., 2018](#); [Clark et al., 2026](#)). Psychological connection with nature has a significant impact on the mental health of college students and their willingness to take a trip ([Ma et al., 2025](#)). Bangladesh has lots of beautiful places to visit, but safety concerns often make it difficult for students to avail the opportunity of experiencing those places ([Rahaman et al., 2025](#)). A sense of connection to the natural world can assist students in coping with stress better and get more sense in their lives, which further contributes to the improvement of mental wellbeing. The latest research that examines nature tourism and mental restoration has put nature connectedness as

a moderator that intensifies the positive influence of travel intention on mental health: when intentions are directed towards nature-related experiences, individuals with high nature-related connectedness obtain disproportionate wellbeing benefits (Avecillas-Torres et al., 2025; Buckley, 2020). In countries like Bangladesh, family has a huge impact on traveling, and especially female students without the presence or permission of family members would face a huge restriction (Talukder et al., 2026). This makes traveling much more difficult for female students who want to connect with nature as a mental healing process. Such sociocultural obstacles restrict their access to a nature-based tourism experience, which could help them to reduce stress, restore their mind, and enhance their mental health.

H7. *Travel frequency moderates travel intention and students' mental health.*

The frequency of travel moderates the degree to which travel intention can be translated into mental health gains. Recurring travel experiences ensure psychological recovery, emotional strength and stress relief opportunities (C.-C. Chen et al., 2016; Tyagi et al., 2024). Students can relieve their stress by taking short breaks, which motivates them to travel due to having mental freshness. In terms of the frequency of vacation, the highest level of stress and life satisfaction was reported to be associated with the highest number of vacationers with multiple vacations annually; mental health professionals and organizations include promoting regular and scheduled vacations among students as a preventive measure against stress and burnout (Nurja & Bendo, 2025). Leisure travel frequency determines the quality of life of tourists by demonstrating this relationship via the moderating processes of happiness and psychological resilience and by further investigating who benefits most in terms of quality of life (Mulcahy et al., 2026). However, in Bangladesh many students have a fairly strong desire to travel but do not have the funds to go to tourist attractions. Those economic constraints can limit the amount of travel, as well as the number of people traveling, which lessens the possibility of a positive mental health impact from tourism (C.-C. Chen et al., 2016).

H8. *Travel involvement plays a positive mediating role between travel intention and student's mental health.*

The framework for tourism has explained the mechanism of tour outcomes and satisfaction in a precise way. However, the intention of traveling cannot motivate students unless they get a memorable and worthwhile experience on their trip. So, psychological engagement plays a mediating role in student's desire to go on a tour and the outcome. Participation is the variable that describes the way travel intention turns into a meaningful experience (Cao et al., 2023; Prayag et al., 2017). When tourists are more engaged, they devote both emotional and cognitive resources to the preparation and consumption of the experience, which increases the restorative impacts of tourism (Lin & Yang, 2024). When students engage more with the practical organization and arrangement of their excursion, they feel more included, and the exposure gives them the ultimate satisfaction. A meaningful experience relates to a more satisfactory psychological outcome, and hence it assures travel involvement as an intermediary between the travel intention and student mental health (Vada et al., 2022).

H9. *Social connectedness as a mediator between travel intention and students' mental health.*

Social connectedness acts as a mediator between travel intention and mental health of students since the psychological outcomes of travel intention can be achieved largely

by the expected and real social ties created through travel. Traveling is one of the most effective ways to strengthen students’ prosocial behavior, and social engagement serves as a tie between their psychological wellbeing and travel intention (Y. Li et al., 2022). Also, meeting residents of a place during a visit gives tourists a vivid experience and lifelong moments to cherish (Gu et al., 2024; Styliadis et al., 2020). This eventually makes them more connected with the people and place, leading to emotional wellbeing for the students. Travel intentions have been shown to include anticipations of social experiences and interpersonal connections, which boost a sense of belonging and social support, and such social resources, in turn, elevate mental health. Consequently, travel intention positively influences the mental health of students and does so indirectly through social connectedness, which implies that the wellbeing effects of travel lie in its social aspect instead of the practical relaxation or escape of the individual (Zhuang & Wang, 2024). While traveling can be a great stress reliever and a way of accommodating psychological tension, economic restrictions and opportunity inequalities can create negative emotions among students within the same social group (McCabe, 2009).

2.3. Conceptual Framework

The conceptual framework (Figure 1) of the study intends to examine how travel intention affects student mental health, and several major constructs will be applied in the relationship. Travel intention of students, as an independent variable, is a higher-order formative construct that consists of five sub-constructs, including travel self-efficacy, social influence pressure, value of experience, perceived affordability, and attitude toward tourism. These sub-constructs in totality determine the intention of the students to travel, and this factor is critical in boosting their mental health. The framework identifies two mediators: travel involvement and social connectedness. Travel involvement represents how much the students participate in the planning and experiencing of travel, and this has been said to influence the mental health outcomes of the students in general. Social connectedness will be seen as that feeling of the sense of connection that students feel with other people during traveling, which plays a vital role in terms of emotional wellbeing and alleviating stress.

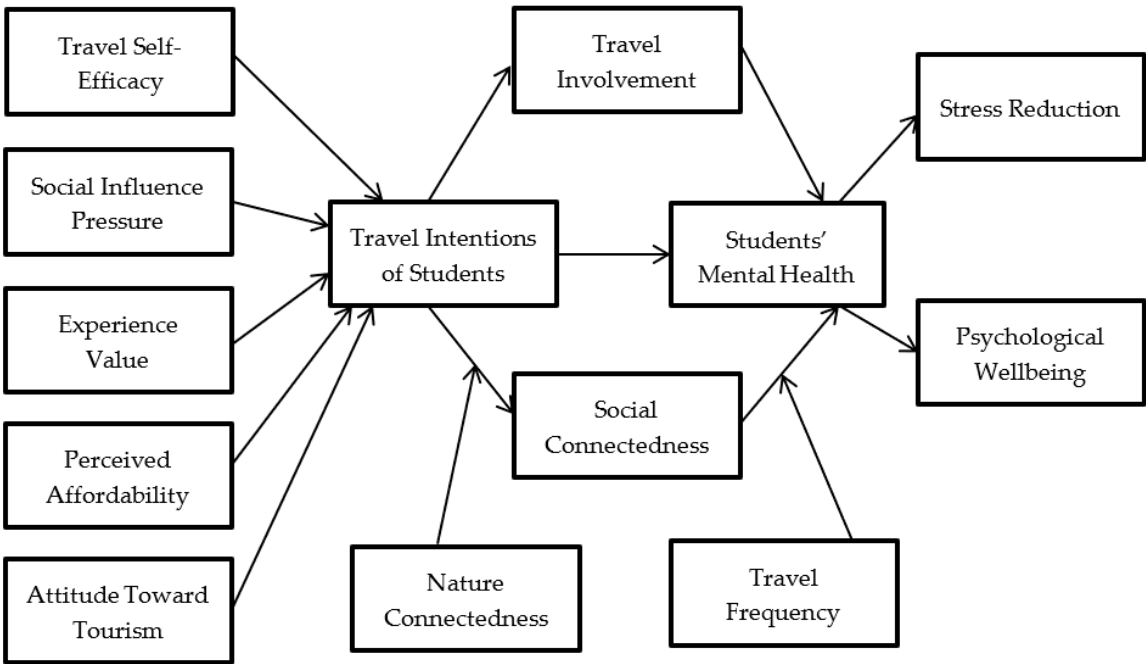


Figure 1. Conceptual framework.

Two moderators are also integrated into the framework: nature connectedness and frequency of traveling. Nature connectedness mediates the association between travel intention and student mental health because it has been seen that exposure to nature can and does play a major role in stress relief and psychological recovery. The frequency of travel also plays a role in the intensity of this relationship whereby more traveling could result in cumulative benefits to the wellbeing of the students. Student mental health is defined as the dependent variable, which is measured in two constructs, stress reduction and psychological wellbeing. The framework assumes that better mental health outcomes are the ultimate result of travel intention, which is mediated by travel involvement and social connectedness, and nature connectedness and travel frequency are the main moderators.

Within the proposed framework, travel involvement and social connectedness function as explanatory mechanisms through which travel intention influences students' psychological outcomes. Travel involvement reflects the degree to which students actively engage in planning and participating in travel experiences, while social connectedness captures the interpersonal benefits derived from these experiences. Nature connectedness and travel frequency are incorporated as boundary conditions because the psychological benefits of travel are unlikely to be uniform across individuals. Students who are more connected to natural environments or who travel more frequently are expected to experience stronger restorative benefits, thereby strengthening the relationship between travel intention and mental health.

3. Materials and Methods

3.1. Research Design

The study utilized a mixed-method design in a sequence where it was exploratory in nature, followed by a quantitative phase that was confirmatory. The research is cross-sectional, as quantitative data was measured at one point in time to prove the relationships between the constructs that were hypothesized. The conceptualization of the travel intention and student mental health in the Bangladeshi university setting was improved at the qualitative stage, and the clarity of items was enhanced before the survey. The general structure aligns with sequential mixed-method reasoning, in which the initial qualitative data becomes the basis of initial instrument construction and model specification to be tested on a large scale (Creswell & Clark, 2007). Given the cross-sectional nature of the research design and the reliance on self-reported measures, the findings should be interpreted as reflecting statistical associations rather than causal relationships. Although the proposed conceptual framework is theoretically informed by the Theory of Planned Behavior (TPB) and Stress Recovery Theory (SRT), the present study does not establish causal or therapeutic effects of tourism on students' wellbeing. Instead, the results represent students' perceived travel intention, travel experiences, and self-reported psychological wellbeing and perceived stress reduction at a single point in time.

3.2. Phase 1: Qualitative Study

Phase 1 involved conducting semi-structured interviews with 15 university students to understand how travel intention is described by students, psychosocial processes by which tourism is connected to mental health, and the contextual barriers and facilitators to restorative travel. A purposive selection was used to recruit participants to ensure that there was a variation of gender, academic discipline, and previous experience of leisure traveling. The interviews were about 35–50 min and were audio-taped with permission and transcribed word-for-word. Reflexive thematic analysis was used to analyze the data, following the familiarization, coding, theme development, review, and definition process described by Braun and Clarke (2006). The coding was informed by the theories,

whereby the Theory of Planned Behavior (Ajzen, 1991; Benny, 2021) was used to inform the interpretation of the intention-related drivers, and the Stress Recovery Theory (Hartig et al., 1997) was used to interpret recovery-oriented drivers and mental health outcomes. The interview transcripts were independently coded by the primary researcher following the six-phase reflexive thematic analysis procedure proposed by Braun and Clarke (2006). Initial codes were generated through repeated reading of the transcripts and subsequently refined into broader themes through an iterative process of reviewing, comparing, and merging conceptually related codes. To enhance the credibility of the analysis, the emerging themes were discussed with the co-authors until consensus was reached. The final themes were then used to refine the survey instrument, validate the proposed constructs, and support the development of the conceptual framework and research hypotheses for the quantitative phase.

3.3. Phase 2: Quantitative Study

3.3.1. The Population and Sample Design

The target group was undergraduate and post-graduate learners of Bangladesh public and privately run universities. The unit of sampling was a specific student at the university (at least 18 years) who was actively studying and did not refuse to take part. The calculation of the minimum sample size was done using the Cochran (1977) formula of large sample sizes, which is $n_0 = (Z^2 p \times (1 - p)) / e^2$, where $Z = 1.96$, $p = 0.5$ and $e = 0.05$. This gives the minimum sample required of 384 respondents (Cochran, 1977). The online Google Form was used to collect the data within a specified fieldwork period (January–March 2026) via a non-probability approach of the combined convenience sampling and snowball circulation methods involving university networks, classes, and student groups. The criteria of eligibility involved the following: currently enrolled in a university in Bangladesh, aged 18 years or above and having experience of leisure traveling as a relaxation or wellbeing activity. As shown in Table 1, 54.5% of responses came from students aged between 18 and 22 years old, while the remaining responses came from students aged 23–27 years old. Of the total respondents in this study, 77.8% are male; based on Bangladeshi sociocultural effects, male students are usually more likely to have the ability to travel, while female students struggle. Respondents were comfortable traveling with their friends and family, while very few wanted a solo tour. As private university students have better economic power than public university students, this study is dominated by respondents from private universities. There was a total of 604 available responses, which is above the minimum requirement and provides an adequate sample size in the PLS-SEM with mediation and moderation paths (J. Hair & Alamer, 2022; Sarstedt et al., 2021).

3.3.2. Data Collection Procedure

The survey tool was developed in the English language considering the need to provide the context-sensitive words that were developed during the qualitative stage and previously tested scales. The purpose of the study, voluntary participation, and guaranteed confidentiality were briefly presented, and informed consent was inevitably carried out electronically prior to the respondents being allowed to access questionnaire items. The questionnaire had simple wording, regular response anchors and a logical order of sections to enhance the quality of responses. The screening of the responses was done with respect to completeness, straight-lining patterns, and duplication, after which the final analysis was done, which led to 604 valid cases being used in the modeling.

Table 1. Demographic information.

Demographics	Particulars	Frequency	Percentage
Age	18–22 Years	330	54.5
	23–27 Years	275	45.5
Gender	Male	470	77.8
	Female	134	22.2
Education	BBA	546	90.2
	BSc	53	8.8
	MBA	5	0.8
	MSc	1	0.2
Tour Partner	Friends	300	49.6
	Solo Tour	36	6
	Family	269	44.4
Tour experience	Yes	503	83.1
	No	102	16.9
Tour Frequency	Monthly	59	9.8
	Half-Yearly	186	30.7
	Yearly	269	44.5
	Do Not Travel	91	15.0
University	Public University	211	35
	Private University	393	65

3.4. Measurement of Constructs

Multi-item measures were used (see Table 2) to operate all constructs, and these are based on other previous studies. The idea of travel intention was used as a higher-order construct, which is manifested through travel self-efficacy, social influence pressure, experience value, perceived affordability, and attitude toward tourism. The construct operationalization of student mental health included stress reduction and psychological wellbeing as the higher-order constructs. Two mediators were added, social connectedness and travel involvement, to reflect on interpersonal and involvement processes through which the travel intention could be converted into mental health results, and nature connectedness was modeled as a moderator between travel and mental health results because of the affinity of individuals to nature. Everything was measured using a five-point Likert scale (1 = strongly disagree, 5 strongly agree).

Table 2. Constructs, theoretical base, and measurement sources.

Type	Construct (Full Name)	Theory Base	Primary Source(s)	No. of Items	Example Item Wording (Abbrev.)
Independent (HOC: Travel Intention)	Travel Self-Efficacy	TPB (perceived behavioral control/self-efficacy)	(Bandura, 1997; M.-F. Chen & Tung, 2014)	4	I can organize a leisure trip.
Independent (HOC: Travel Intention)	Social Influence Pressure	TPB (subjective norms)	(Ajzen, 1991; Lam & Hsu, 2004)	4	Friends' travel posts influence my choices.
Independent (HOC: Travel Intention)	Experience Value	TPB (behavioral beliefs)	(Choe & Kim, 2019; Pine & Gilmore, 1998)	4	I prefer unique and meaningful destinations.

Table 2. Cont.

Type	Construct (Full Name)	Theory Base	Primary Source(s)	No. of Items	Example Item Wording (Abbrev.)
Independent (HOC: Travel Intention)	Perceived Affordability	TPB (control beliefs)	(Choe & Kim, 2019)	4	Traveling for relaxation is affordable for me.
Independent (HOC: Travel Intention)	Attitude Toward Tourism (for wellbeing)	TPB (attitude)	(Ajzen, 1991)	4	I feel positive about traveling for health.
Mediator	Travel Involvement	Engagement/ involvement perspective in leisure/tourism	(Havitz & Dimanche, 1997; Kyle & Chick, 2002)	4	I am highly involved in planning trips.
Mediator	Social Connectedness	Interpersonal connectedness/relatedness mechanism	(R. M. Lee et al., 2001; R. M. Lee & Robbins, 1995)	4	Travel helps me feel connected to others.
Moderator	Nature Connectedness	SRT (person–environment interaction)	(Mayer et al., 2009; Nisbet et al., 2009)	4	I feel emotionally connected to nature.
Dependent (HOC: Student Mental Health)	Stress Reduction	SRT (stress recovery)	(S. Cohen et al., 1983)	4	Traveling reduces my stress.
Dependent (HOC: Student Mental Health)	Psychological Wellbeing	SRT (positive outcomes)	(Sirgy, 2010; Tennant et al., 2007)	4	Travel improves my overall wellbeing.

3.5. Analysis Procedure

Partial Least Squares Structural Equation Modeling (PLS-SEM) of SmartPLS (Version 4) was the method applied to analyze the quantitative model to fit a prediction-oriented study, complex models with higher-order constructs, and concurrent estimation of mediation and moderation effects (J. Hair & Alamer, 2022). The analysis was done in two stages. The reflective measurement model was initially evaluated based on indicator loadings, internal consistency reliability (Cronbach's alpha and composite reliability), and convergent and discriminant validities based on the HTMT criterion. Second, collinearity diagnostics, bootstrapped path coefficients (5000 subsamples), the coefficient of determination (R²), effect sizes (f²), predictive relevance (Q²), and general model fit indicators like SRMR were used to assess the structural model where necessary. The assessment of the mediation effects was conducted in terms of bias-corrected bootstrapped indirect effects, and the moderation was determined through the product–indicator interaction evaluation of the assessment of the interaction term between nature connectedness and the focal predictor paths.

3.6. Common Method Bias

Since the survey was based on a single-source self-reported scale, both procedural and statistical remedies to the common method bias (CMB) were employed, which is also in accordance with best-practice recommendations (Podsakoff et al., 2003). The respondents were also assured of anonymity and confidentiality, and the process was voluntary; additionally, respondents were informed of the questionnaire instructions in that there were no right or wrong answers, thus decreasing evaluation apprehension and social desirability. The items were selected using known scales and modified with particular care of wording.

to reduce ambiguity, and the instrument was designed in such a way that the predictor and outcome constructs were presented in different sections to lessen the respondent desire to infer relationships. Statistically, the full collinearity test in PLS-SEM was applied to determine the CMB with a variance inflation factor (VIF) of less than 3.3, meaning that common method variance is unlikely to produce biased parameter estimates (Kock, 2015). Moreover, a one-factor diagnosis was also tested, which would also show that a single latent factor did not explain most covariance between indicators, which would also indicate convergent validity that CMB was not a strong threat to validity.

3.7. Ethical Considerations

During the two stages of the research, ethical considerations were upheld. Before obtaining informed consent, the participants were informed of the study purpose, voluntary participation and guaranteed confidentiality. No personal data were used in the survey, and the qualitative data was anonymized with the help of participant codes. All the data were kept in a safe place and were not utilized in any other way than to conduct academic research.

4. Results

4.1. Thematic Analyses (Qualitative Analysis)

The thematic analysis in Table 3 shows that the mental health outcome of students is directly influenced by travel intention, which is formed under the influence of such factors as travel self-efficacy, social influence, experience value, perceived affordability, and travel tourism attitude. Students who believe that they can organize and make trips, who are inspired by their peers, and who have meaningful traveling experiences are more likely to have a significant level of stress relief and psychological wellbeing after their trips. However, a major impediment that affected most students was financial limitations, which restricted their participation in restorative traveling. After all, mental health outcomes depend mainly on the attitude toward tourism as a self-treatment or stress-relief practice.

Table 3. Thematic analysis.

Theme	Subtheme	Description	Example Quotes (Student Codes)
Travel Self-Efficacy (TPB)	Strong Confidence	Confidence in planning and organizing travel.	I am quite confident to deal with the travel logistics independently. (S1) I like the way of planning everything, flight booking, and activity selection. (S2)
	Weak Confidence	Challenges faced in managing the planning process.	I usually get stressed when I would plan everything including accommodation and transport. (S3) Budgeting is a problem to me. I do not necessarily know how to budget the budget of a trip. (S4)
Social Influence Pressure (TPB)	Peer Encouragement	Influence of peers on travel decisions.	My friends are the ones who urge me to travel. They send me frequently links to journeys and attempt to induce me to accompany them. (S5) I would be motivated when my friends discuss their trips and make me want to go with them. (S6)
	Peer Pressure	Feeling pressured to travel, especially when friends have already planned.	I am sometimes pressured by my friends that are extremely spontaneous regarding traveling. (S7) When my friends already have a plan, I think I should go in with them even though I am not certain. (S8)

Table 3. Cont.

Theme	Subtheme	Description	Example Quotes (Student Codes)
Experience Value (TPB)	Memorable Experiences	Travel experiences that create lasting memories.	The best experience was when I went to a small town with my friends and we explored a whole day hiking and enjoying the nature. (S9) The most valuable experiences I have in traveling are always related to nature or new culture. (S10)
	Seeking Adventure	Preference for adventure travel.	"I enjoy adventure travel. Its uniqueness is the excitement of discovering new destinations and experimenting with new things. (S11) I prefer activities that are physically and mentally demanding such as hiking or visiting historical sites. (S12)
Perceived Affordability (TPB)	Financial Limitations	Financial constraints that limit travel options.	I am always concerned with budgeting. I seek cheap destinations, which will not empty my pockets. (S13) I tend to go to places that are not far and do not force me to use costly accommodation. (S14)
	Affordable Travel Options	Choosing destinations and activities within budget.	I like places where I will be offered student discounts or where I can get cheap accommodation such as hostels. (S15) I usually do off-season traveling to evade an increase in costs and to seek better offers. (S1)
Attitude Toward Tourism for Wellbeing (SRT)	Stress Relief	Perception of travel to reduce stress.	Travelling is among the most effective methods of stress relief. It makes me forget about the pressure associated with the university and allows me to take a break. (S2) I always come back to myself in a better mood, physically. It's like a reset for my mind." (S3)
	Self-Care	Travel as an act of self-care for mental health.	Tourism is a form of resetting with emotions to me. It is like having a moment of no longer being stressed with academic life and re-connecting with myself. (S4) Travel gives me a platform to reflect on my life which is a great aspect to the state of my mental health. (S5)
Travel Involvement (SRT)	Planning Engagement	Involvement in planning and decision-making for travel.	I am a very serious trip planner, in finding out more about the destination and the activities. (S6) I like to look up the top places to visit and consider all the details of the trip. (S7)
	Active Participation	The excitement and connection from being actively involved in planning.	The deeper I am into the planning process, the more excited I become about the trip. (S8) I think I am closer to the trip when I am personally involved in its organization. (S9)
Social Connectedness (SRT)	Strengthened Relationships	Travel enhancing bonds and relationships with peers.	Travel gives me a stronger friendship and family ties. We have something in common like experience and new adventures. (S10) Spending time with the friends when traveling brings in memorable life moments and strengthening our connections. (S11)
	Peer Bonding	Feeling connected and bonded with friends during travel.	I like being very close to my friends whenever we are traveling. It is a good method to have quality time. (S12) It is always a unique thing to have some experiences and difficulties traveling with your best friends. (S13)

Table 3. Cont.

Theme	Subtheme	Description	Example Quotes (Student Codes)
Perceived Restorativeness (SRT)	Environmental Restoration	The ability of new environments to restore mental wellbeing.	I re-adjust my psychological condition through being in nature, not in the city. It's like I can breathe again. (S14) I get rejuvenated when I am in serene settings such as forests or around the sea. (S15)
	Mental Clarity	Feeling clearer and more focused after a trip.	I will feel better after having been in nature. It assists me to be concentrated on what matters. (S1) Travel gives me the ability to relax my mind. I find myself in a position to concentrate more on the studies after a trip. (S2)
Stress Reduction (SRT)	Escaping Academic Pressure	Travel as an escape from the stress of university life.	I like to get away from the deadlines and assignments that are taking up the pressure, and the answer to this is traveling. (S3) I can also feel that I was able to take a break after I come back after a trip and can better concentrate on schoolwork. (S4)
	Mental Recovery	How travel contributes to mental recovery and relaxation.	Burnout is relieved by making short visits to quiet places. I return in a rejuvenated mood. (S5) My travel stress is also minimized by the physical activity during the movement process such as hiking which makes me feel better. (S6)
Psychological Wellbeing (SRT)	Improved Mood	How travel contributes to emotional balance and happiness.	I like to travel because it cheers me up, particularly when I am in the natural setting or where I can relax. (S7) I always feel even happier and inspired after traveling, but when I am with my dearest people. (S8)
	Emotional Balance	The restoration of emotional balance and clarity after travel.	I have noticed that after a trip I feel more at ease and positive about the future. (S9) Travel makes me emotionally balanced and clear. It makes me feel refreshed when I come back. (S10)
Nature Connectedness (Moderator)	Sense of Calmness	The calming effect of nature on mental wellbeing.	I feel the soothing influence of nature. The images, sounds and smells of the outdoor environment make me feel calmer and more comfortable. (S11) Being in nature enables me to forget everything and concentrate on the present. (S12)
Travel Frequency (Moderator)	Impact on Stress	How frequent travel helps students cope with stress.	I travel a lot and this travel has enabled me to cope with stress. It provides me with a healthy outlet of recharging and forgetting the academic pressure. (S13) I also travel more now, since it makes me cope with stress and feel more balanced. (S14)

Beyond highlighting the positive psychological benefits of travel, the qualitative findings also revealed several challenges that may limit these benefits. Participants frequently referred to financial constraints, limited confidence in planning and undertaking travel, and peer pressure as barriers to engaging in travel experiences. Financial limitations restricted students' ability to participate in leisure travel, while weak travel confidence reduced their willingness to explore unfamiliar destinations. In addition, peer pressure and social expectations sometimes influenced travel decisions in ways that generated stress rather than relaxation. These findings suggest that the psychological benefits of travel are

context-dependent and reinforce the inclusion of travel self-efficacy, social influence, and travel intention within the proposed conceptual framework.

4.2. Matrix Coding

With a matrix coding query, we get the opportunity to examine the relationship between various themes and their interactions (see Table 4). It is possible to determine the interrelations between the themes, e.g., the role of travel self-efficacy (TSE) in stress reduction (SR) or the impact of social influence (SI) on psychological wellbeing (PW).

Table 4. Matrix coding.

Themes	TSE	SI	EV	PA	ATT	SC	TI	NC	SR	PW
TSE	1	1	1	0	1	0	1	0	1	1
SI	1	1	1	1	1	1	1	0	1	1
EV	1	1	1	1	1	1	1	0	1	1
PA	1	1	1	1	0	0	1	0	1	0
ATT	1	1	1	1	1	1	1	0	1	1
SC	0	1	1	1	1	1	1	1	1	1
TI	1	1	1	0	1	1	1	0	1	1
NC	0	0	1	0	1	1	1	1	1	1
SR	1	1	1	1	1	1	1	1	1	1
PW	1	1	1	1	1	1	1	1	1	1

Travel self-efficacy (TSE) has a proper relationship with social influence (SI) and travel involvement (TI), which means that students who feel more confident about their capability of planning their trips will most likely participate in traveling. This, in its turn, improves their psychological wellbeing (PW) and stress reduction (SR). The social influence pressure is associated with the experience value, attitude toward tourism and involvement in traveling. The involvement of peers in encouraging students to travel increases engagement of the students towards travel, which contributes to a reduction in stress and greater wellbeing. Experience value has a strong impact on stress reduction and psychological wellbeing. The students who perceive their travel experiences as meaningful (be it adventure, learning or restoring) demonstrate higher emotional recovery. Perceived affordability is a key variable, especially in its effect on travel intentions. Students who view traveling as something affordable will tend to participate in traveling that will result in stress management improvements and the general state of their mental health. Attitude towards tourism (ATT) is highly correlated with all other constructs, and hence it is found that students who perceive tourism as a way of relieving stress have high psychological wellbeing. Social connectedness (SC) is a theme that serves to mediate the positive outcomes of stress reduction and psychological wellbeing, which states that traveling with social connections (friends or family) increases the positive psychological effects of tourism. Travel involvement (TI) is a mediator: the higher the trip organization and involvement, the better the outcome in terms of de-stress and wellbeing. The moderator that enhances the effect of travel on psychological wellbeing is nature connectedness, and nature-based travel is especially restorative to students. Spending time in nature can greatly decrease the amount of stress and enhance mental health. The relationship between stress reduction and psychological wellbeing is highly interrelated because stress reduction leads to psychological wellbeing. Social factors and nature connectedness (NC) are major sources of these.

4.3. Word Frequency Analysis

Table 5 shows the most frequent terms mentioned by students. This helps us identify the central concepts discussed in the interviews.

Table 5. Word frequency analysis.

Word	Frequency	Example Context
Travel	20	"I feel very confident about handling travel logistics on my own."
Stress	18	"Stress reduction is one of the main benefits of taking a trip."
Wellbeing	14	"I believe wellbeing is a result of both travel and social interaction."
Relax	15	"Travel helps me relax and unwind from the constant pressure of university."
Nature	13	"Nature plays a big role in helping me feel restored and mentally clear."
Confidence	11	"I feel a lot of confidence in planning my trips, especially when I have enough time."
Social	10	"I feel connected to others when we travel together, which contributes to my social wellbeing."
Recharged	8	"I always come back feeling recharged and ready to tackle my responsibilities."
Experience	7	"The experience of traveling to new places helps me grow emotionally."

The most frequent terms are related to stress and wellbeing, indicating that students strongly associate travel with psychological restoration.

4.4. Connectedness Diagram

Figure 2 shows the connectedness diagram. Travel self-efficacy and social influence pressure determine travel involvement, which influences stress reduction and psychological wellbeing. Experience value and perceived restorativeness are also associated with stress reduction and psychological wellbeing, and this proves the effects of meaningful experiences (e.g., nature) on students to be able to get their mind straight.

4.5. Qualitative Comparative Analysis (QCA)

The rows of the truth table (Table 6) depict a different combination of the conditions (variables): 1 indicates the presence of the condition and 0 indicates the absence of the condition. The outcome columns (stress reduction and psychological wellbeing) indicate either the outcome (1) or the non-occurrence (0) of each combination of conditions.

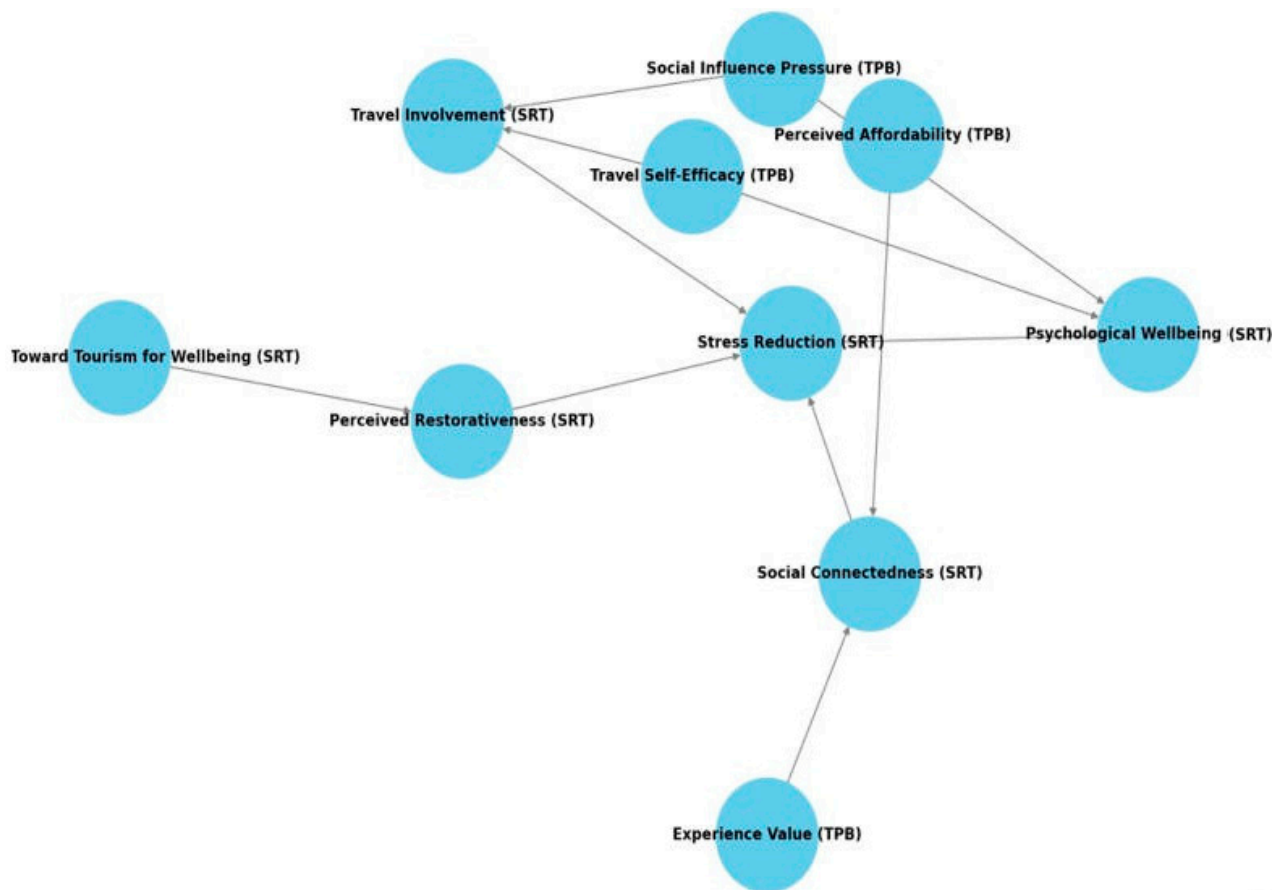


Figure 2. Connectedness diagram.

Table 6. QCA truth table.

TSE	SI	EV	PA	ATT	SC	TI	NC	SR	PW
1	1	1	1	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	0
1	0	1	1	1	0	1	1	1	1
0	1	0	1	1	1	0	0	0	0
1	1	0	0	1	1	1	1	0	1
0	0	1	1	0	1	1	0	1	1
1	1	1	0	1	1	0	1	1	1
0	0	1	1	0	1	0	1	1	1
1	1	0	0	1	0	0	1	0	0
1	0	1	0	0	0	0	0	0	0

4.6. Measurement Model

The measurement model, as shown in Figure 3, is assessed by using PLS-SEM4. Afterwards, we designed and tested a structural model, as shown in Figure 4, to assess the hypotheses. Item-level factor loadings, variance inflation factor (VIF), Cronbach's alpha, Rho_A, composite reliability, and average variance extracted (AVE) were checked for the purpose of assessing construct validity and reliability. Previous studies suggest that the cutoff point for the reliability value is 0.70 (Chin et al., 2003; Gujarati, 1970). Table 7 shows that all items have confirmed the desired value, as factor loadings have a minimum value

of 0.757 and maximum value 0.906, except item SIP3. To check the collinearity problem, VIF values were assessed. VIF values ranged from 1.259 to 3.136, which is less than 5. Therefore, the data set has no collinearity issue (J. Hair & Alamer, 2022). Regarding the measurement of internal consistency, we assessed Cronbach's alpha, composite reliability and Rho_A. Composite reliability values are greater than 0.7. Cronbach's alpha and Rho_A are also satisfactory due to having values greater than 0.7, except the SIP construct. However, the AVE values for all constructs are satisfactory, as the values range from 0.541 to 0.806, which reached the threshold of 0.50. Although the social influence pressure construct exhibited a Cronbach's alpha value slightly below the recommended threshold, its composite reliability and average variance extracted satisfied the recommended criteria, indicating acceptable convergent validity. The indicator SIP3 was retained because it captures an important aspect of perceived social influence that complements the conceptual domain of the construct. Following J. F. Hair et al. (2021), indicators with relatively lower loadings may be retained when they contribute to content validity and the overall measurement quality remains acceptable.

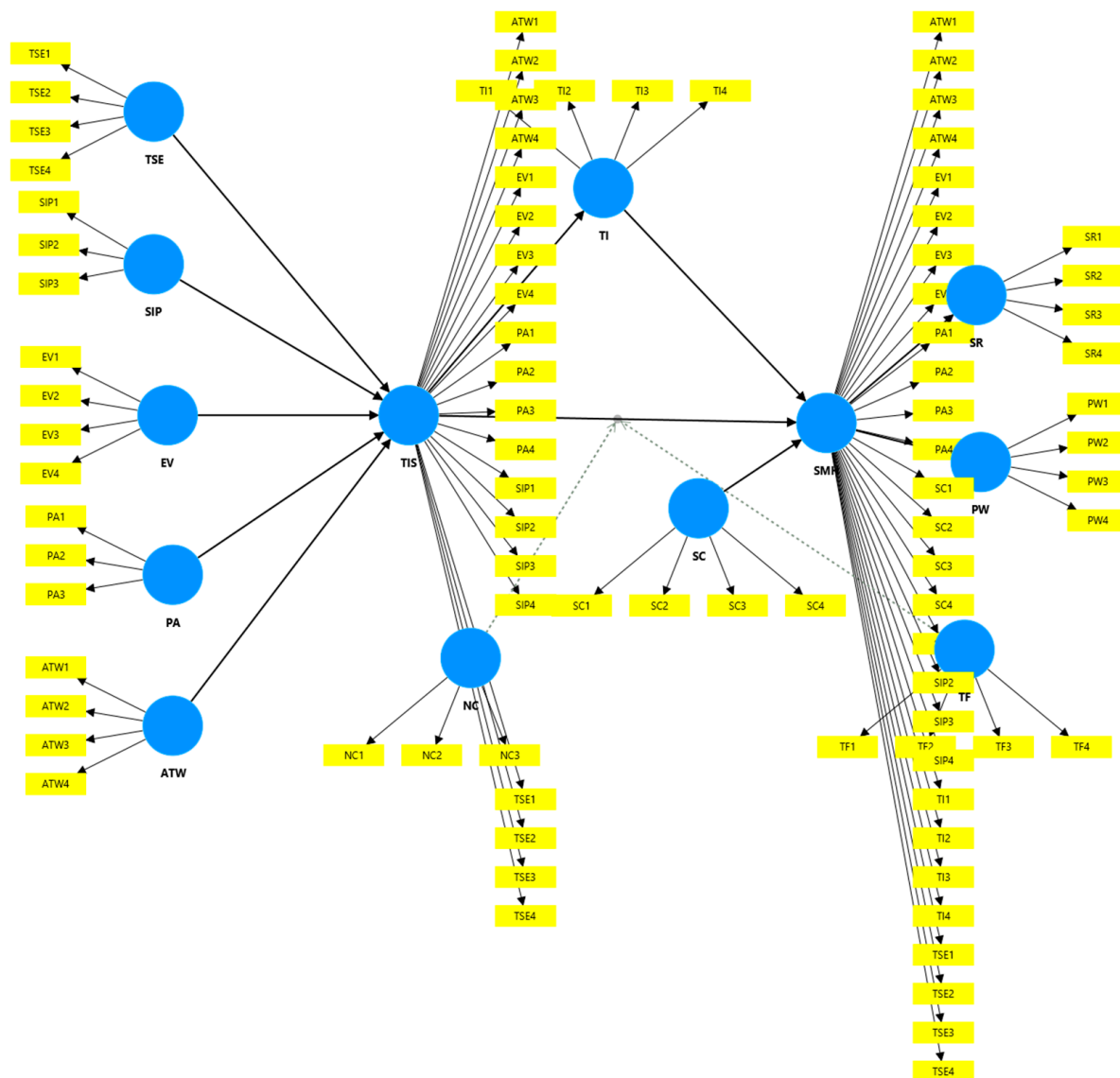


Figure 3. Measurement model.

Table 7. Internal consistency (measurement of the constructs).

Constructs	Items	Factor Loadings	Cronbach's Alpha	Rho_A	Composite Reliability	AVE	VIF
Attitude toward tourism	ATW1	0.876	0.910	0.911	0.937	0.788	2.536
	ATW2	0.883					2.698
	ATW3	0.906					3.136
	ATW4	0.886					2.803
Experience value	EV1	0.851	0.851	0.854	0.900	0.691	2.045
	EV2	0.787					1.707
	EV3	0.835					1.972
	EV4	0.851					2.105
Nature connectedness	NC1	0.897	0.880	0.880	0.926	0.806	2.349
	NC2	0.901					2.516
	NC3	0.895					2.433
Perceived affordability	PA1	0.815	0.686	0.688	0.827	0.614	1.418
	PA2	0.772					1.371
	PA3	0.763					1.259
Psychological wellbeing	PW1	0.867	0.885	0.886	0.921	0.744	2.290
	PW2	0.858					2.265
	PW3	0.879					2.544
	PW4	0.845					2.118
Social connectedness	SC1	0.835	0.864	0.864	0.907	0.710	1.936
	SC2	0.852					2.145
	SC3	0.845					2.075
	SC4	0.838					2.006
Social influence pressure	SIP1	0.833	0.568	0.617	0.775	0.541	1.306
	SIP2	0.790					1.288
	SIP3	0.553					1.077
Stress reduction	SR1	0.869	0.890	0.893	0.924	0.752	2.418
	SR2	0.837					2.207
	SR3	0.882					2.610
	SR4	0.879					2.582
Travel frequency	TF1	0.839	0.846	0.850	0.896	0.683	1.929
	TF2	0.851					2.156
	TF3	0.802					1.736
	TF4	0.813					1.948
Travel involvement	TI1	0.757	0.811	0.814	0.876	0.639	1.851
	TI2	0.824					1.872
	TI3	0.845					2.003
	TI4	0.769					1.567
Travel self-efficacy	TSE1	0.836	0.825	0.828	0.884	0.655	1.847
	TSE2	0.790					1.675
	TSE3	0.810					1.704
	TSE4	0.801					1.744

Abbreviations: AVE = average variance extracted; VIF = variance inflation factor.

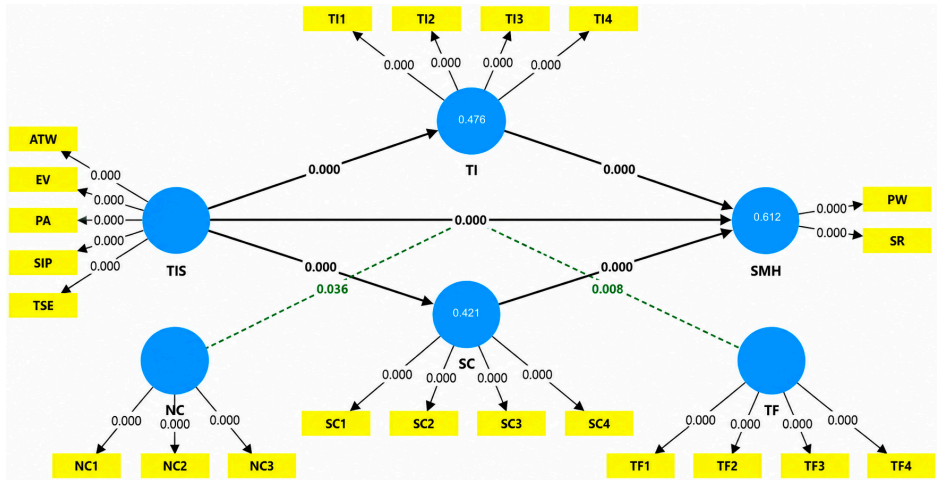


Figure 4. Structural model.

4.6.1. Discriminant and Convergent Validity

Discriminant and convergent validity were checked to assess whether the items are distinct from each other, and they can properly reflect the corresponding measured constructs (MacKenzie et al., 2011). Therefore, Table 8 representing the HTMT ratio is well established, as values are less than the cutoff point of 0.90 (Henseler et al., 2015). As per Table 9, the Fornell–Lacker Criteria is satisfactory, as the diagonal values are higher. As shown in Table 10, factor loadings exceeded the value of cross-loadings; therefore, the items are legitimate for measuring the constructs.

Table 8. HTMT.

	ATW	EV	NC	PA	PW	SC	SIP	SR	TF	TI	TSE
ATW											
EV	0.773										
NC	0.796	0.747									
PA	0.727	0.784	0.691								
PW	0.811	0.717	0.808	0.694							
SC	0.799	0.710	0.707	0.679	0.779						
SIP	0.608	0.725	0.550	0.708	0.592	0.667					
SR	0.865	0.712	0.784	0.725	0.867	0.790	0.573				
TF	0.373	0.297	0.364	0.430	0.412	0.387	0.520	0.416			
TI	0.767	0.782	0.749	0.788	0.743	0.728	0.664	0.751	0.470		
TSE	0.455	0.564	0.474	0.563	0.471	0.447	0.529	0.482	0.500	0.627	

Table 9. Fornell–Larcker.

	ATW	EV	NC	PA	PW	SC	SIP	SR	TF	TI	TSE
ATW	0.888										
EV	0.683	0.832									
NC	0.714	0.648	0.898								
PA	0.576	0.601	0.539	0.784							
PW	0.730	0.622	0.715	0.542	0.862						
SC	0.708	0.610	0.617	0.523	0.682	0.843					
SIP	0.451	0.523	0.401	0.457	0.434	0.477	0.736				
SR	0.781	0.623	0.697	0.568	0.771	0.694	0.420	0.867			
TF	0.330	0.253	0.318	0.333	0.361	0.333	0.350	0.364	0.827		
TI	0.660	0.652	0.635	0.589	0.631	0.609	0.454	0.641	0.390	0.799	
TSE	0.397	0.475	0.405	0.427	0.405	0.379	0.358	0.416	0.418	0.513	0.809

Table 10. Cross-loadings.

	ATW	EV	NC	PA	PW	SC	SIP	SR	TF	TI	TSE
ATW1	0.876	0.645	0.663	0.512	0.645	0.615	0.437	0.705	0.278	0.591	0.373
ATW2	0.883	0.575	0.612	0.489	0.628	0.634	0.367	0.680	0.272	0.597	0.331
ATW3	0.906	0.623	0.646	0.527	0.675	0.640	0.433	0.703	0.308	0.577	0.355
ATW4	0.886	0.578	0.611	0.516	0.643	0.626	0.360	0.684	0.313	0.579	0.349
EV1	0.604	0.851	0.565	0.541	0.513	0.535	0.474	0.553	0.218	0.535	0.438
EV2	0.499	0.787	0.464	0.451	0.511	0.466	0.393	0.459	0.233	0.508	0.337
EV3	0.585	0.835	0.558	0.500	0.509	0.507	0.424	0.530	0.191	0.579	0.398
EV4	0.577	0.851	0.560	0.504	0.538	0.516	0.444	0.525	0.201	0.545	0.401
NC1	0.655	0.573	0.897	0.505	0.676	0.585	0.371	0.634	0.324	0.594	0.407
NC2	0.649	0.578	0.901	0.474	0.633	0.533	0.341	0.625	0.276	0.561	0.337
NC3	0.617	0.593	0.895	0.469	0.615	0.543	0.367	0.616	0.255	0.553	0.345
PA1	0.484	0.521	0.485	0.815	0.444	0.414	0.392	0.476	0.240	0.510	0.306
PA2	0.425	0.437	0.400	0.772	0.405	0.405	0.305	0.413	0.189	0.441	0.293
PA3	0.442	0.452	0.378	0.763	0.422	0.411	0.371	0.442	0.347	0.429	0.402
PA4	0.374	0.386	0.322	0.415	0.362	0.370	0.344	0.382	0.375	0.439	0.391
PW1	0.692	0.560	0.675	0.484	0.867	0.606	0.397	0.687	0.336	0.564	0.381
PW2	0.598	0.518	0.587	0.458	0.858	0.605	0.347	0.641	0.280	0.530	0.336
PW3	0.611	0.544	0.613	0.489	0.879	0.573	0.373	0.668	0.320	0.538	0.338
PW4	0.613	0.523	0.587	0.435	0.845	0.568	0.375	0.661	0.307	0.543	0.340
SC1	0.618	0.541	0.531	0.457	0.560	0.835	0.423	0.581	0.239	0.529	0.318
SC2	0.601	0.483	0.512	0.434	0.577	0.852	0.406	0.585	0.295	0.530	0.305
SC3	0.569	0.512	0.514	0.440	0.590	0.845	0.396	0.573	0.305	0.522	0.352
SC4	0.599	0.519	0.525	0.431	0.572	0.838	0.382	0.599	0.285	0.473	0.302
SIP1	0.415	0.478	0.356	0.399	0.399	0.418	0.833	0.384	0.264	0.398	0.282
SIP2	0.338	0.410	0.321	0.372	0.331	0.371	0.790	0.312	0.240	0.333	0.256
SIP3	0.210	0.223	0.179	0.205	0.194	0.238	0.553	0.207	0.294	0.257	0.263
SIP4	0.082	0.113	0.083	0.144	0.099	0.104	0.326	0.113	0.264	0.160	0.205
SR1	0.740	0.601	0.669	0.511	0.666	0.623	0.430	0.869	0.327	0.600	0.393
SR2	0.620	0.510	0.533	0.477	0.616	0.537	0.285	0.837	0.306	0.534	0.334
SR3	0.669	0.545	0.618	0.504	0.701	0.590	0.393	0.882	0.321	0.553	0.366
SR4	0.672	0.499	0.586	0.475	0.687	0.651	0.339	0.879	0.306	0.530	0.347
TF1	0.301	0.219	0.305	0.329	0.354	0.313	0.327	0.326	0.839	0.360	0.354
TF2	0.255	0.222	0.260	0.277	0.303	0.292	0.311	0.324	0.851	0.321	0.349
TF3	0.305	0.219	0.282	0.247	0.284	0.248	0.254	0.299	0.802	0.314	0.361
TF4	0.222	0.170	0.194	0.238	0.238	0.240	0.258	0.244	0.813	0.286	0.314
TI1	0.479	0.527	0.503	0.482	0.501	0.514	0.389	0.496	0.327	0.757	0.424
TI2	0.591	0.541	0.528	0.482	0.501	0.492	0.376	0.535	0.261	0.824	0.353
TI3	0.562	0.569	0.555	0.482	0.557	0.496	0.337	0.549	0.315	0.845	0.438
TI4	0.472	0.440	0.437	0.434	0.453	0.446	0.352	0.465	0.349	0.769	0.429
TSE1	0.349	0.412	0.338	0.409	0.347	0.336	0.337	0.357	0.350	0.453	0.836
TSE2	0.314	0.353	0.317	0.296	0.290	0.292	0.259	0.290	0.332	0.386	0.790
TSE3	0.357	0.406	0.356	0.346	0.372	0.321	0.296	0.393	0.327	0.425	0.810
TSE4	0.259	0.362	0.297	0.323	0.296	0.274	0.261	0.301	0.346	0.391	0.801

4.6.2. Higher Order Validity Table

Table 11 shows the higher-order validity table, and all the values are satisfactory along with the outer weights, outer loadings and VIF values.

Table 11. Higher-order validity table.

HOC	LOC	Outer Weights	Outer Loadings	VIF
TIS	ATW	0.339	0.848	2.061
	EV	0.292	0.869	2.387
	PA	0.252	0.795	1.802
	SIP	0.203	0.690	1.468
	TSE	0.185	0.639	1.365
SMH	PW	0.583	0.952	2.463
	SR	0.479	0.928	2.463

4.6.3. R Square

Table 12 indicates the square of the R^2 values for the endogenous construct for which the analysis was performed, revealing the percentage of variance that is explained by the structural model. The R^2 value of the model is 0.476, showing that the model has a moderate explanatory power of 47.6% of the students' travel intention. The same applies to social connectedness (SC), where the R^2 value is 0.421, signifying moderate explanatory power due to the predictor variables. The proposed predictors have the highest explanatory power with $R^2 = 0.612$ for student mental health (SMH) and show that 61.2 percent of the variation in students' mental health is accounted for by the proposed predictors. The adjusted R^2 values are near the corresponding R^2 values, showing stability and not a significant amount of overfitting. Overall, the results indicate that the proposed structural model can well explain the relations between travel intention, social connectedness and student mental health and has good prediction accuracy and explanatory power.

Table 12. R square.

Construct	R-Square	R-Square Adjusted
TI	0.476	0.475
SC	0.421	0.420
SMH	0.612	0.611

4.6.4. F Square

To check the relative contribution of each exogenous construct to the endogenous constructs, the effect size (f^2) was analyzed. According to J. F. Hair et al. (2021), an f^2 of 0.02 represents a small effect size, an f^2 of 0.15 represents a medium effect size and an f^2 of 0.35 represents a large effect size. The results in Table 13 show a medium effect for travel intention of students (TIS) on travel intention (TI) ($f^2 = 0.162$) for the students' overall travel-related perceptions on the formation of travel intention. The other direct relationships, however, had relatively small effect sizes ranging from 0.036 to 0.105, indicating that these predictors do make a meaningful contribution but that the impact they have is relatively weak. Travel intention (TI) ($f^2 = 0.064$) and social connectedness (SC) ($f^2 = 0.039$) were found to contribute to student mental health (SMH), while student mental health showed small effects on psychological wellbeing (PW) ($f^2 = 0.105$) and stress reduction (SR) ($f^2 = 0.086$). In general, these results suggest that the structural model proposed is supported by different predictors with varying levels of practical significance. In addition to the direct effects, the moderation analysis offers some further theoretical understanding

of how the influence of travel intention on student mental health might vary as a function of other factors. The interaction effects between nature connectedness and total involvement in the sustainable management of natural heritage ($TIS \times NC \rightarrow SMH$; $f^2 = 0.056$) and between travel frequency and total involvement in the sustainable management of natural heritage ($TIS \times TF \rightarrow SMH$; $f^2 = 0.036$) suggest small but statistically significant moderating effects. These results indicate that the relationship between traveling intention and mental health of students is enhanced for the group with higher nature connectedness and for those who travel more often. The interaction effect sizes are small, but this is common in behavioral research, and this indicates the need to consider contextual factors in understanding psychological outcomes. The relationship between travel intention and student mental health is strengthened by different circumstances of individual students; therefore, the impact of nature connectedness and travel frequency on student mental health is not direct.

Table 13. F square.

	ATW	EV	NC	PA	PW	SC	SIP	SMH	SR	TF	TI	TIS	TSE
ATW												0.040	
EV												0.060	
NC								0.056					
PA												0.050	
SC								0.039					
SIP												0.038	
SMH					0.105				0.086				
TF								0.036					
TI								0.064					
TIS								0.162		0.055			
TSE												0.050	

4.7. Hypothesis Testing

Table 14 presents the direct relationship between the constructs, and Table 15 represents the mediating effect. Here we can see that all the hypotheses have been accepted except H7, as the T value is greater than 1.96 and p value is less than 0.05. Beyond the observed effect sizes, the moderation analysis suggests that the influence of travel intention on student mental health varies across different contextual conditions. Specifically, higher levels of nature connectedness strengthen the positive association between travel intention and student mental health, indicating that students who feel more connected to natural environments experience greater psychological benefits from travel. Similarly, travel frequency reinforces this relationship, suggesting that students who travel more frequently derive greater wellbeing benefits from their travel experiences. These findings support the theoretical proposition that the psychological outcomes of travel depend not only on travel intention itself but also on individual and contextual characteristics.

Table 14. Path coefficient.

Hypothesis	Relation	Beta Value (β)	SD	T Statistics	<i>p</i> Values	Results
H1	TIS -> SMH	0.125	0.029	4.319	0.000	Supported
H2	TIS -> TI	0.736	0.029	25.478	0.000	Supported
H3	TI -> SMH	0.075	0.020	3.719	0.000	Supported
H4	TIS -> SC	0.716	0.030	23.561	0.000	Supported
H5	SC -> SMH	0.076	0.019	3.917	0.000	Supported
H6	NC $\times$ TIS -> SMH	0.024	0.012	2.098	0.036	Supported
H7	TF $\times$ TIS -> SMH	−0.032	0.012	2.659	0.008	Supported

Table 15. Mediating effect (specific indirect).

Hypothesis	Relation	Beta Value (β)	SD	T Statistics	<i>p</i> Values	Results
H8	TIS -> TI -> SMH	0.055	0.016	3.586	0.000	Supported
H9	TIS -> SC -> SMH	0.055	0.014	3.800	0.000	Supported

5. Discussion

The objective of this study was that travel intention structure (TIS) has a positive effect on student mental health (SMH) both directly and indirectly through travel involvement and social connectedness and nature connectedness and travel frequency as the moderating variables. The findings provide strong empirical support for all proposed hypotheses except H7, which was rejected, reinforcing the theoretical grounding established by prior scholars.

The present findings should be interpreted within the context of the study design. As the data were collected at a single point in time using self-reported responses, the observed relationships indicate perceived associations among travel intention, travel involvement, social connectedness, and students' self-reported psychological wellbeing rather than direct causal effects. Nevertheless, these associations are consistent with the theoretical propositions of the TPB and SRT and provide empirical evidence supporting the proposed conceptual framework.

H1 assumed that TIS has a positive impact on SMH. This relationship is confirmed by the results ($\beta = 0.125$, $p < 0.001$), which show that students with stronger travel intentions report improved psychological wellbeing. This finding aligns with the Theory of Planned Behavior, which posits that intention represents motivational readiness and serves as the most immediate determinant of behavior. According to scholars like (Ajzen, 1991), intention is a result of goal commitment, which ultimately creates psychological positivity. Moreover, Nawijn and Filep (2016) argued that the positive affect is stimulated by anticipation of travel even before its actual participation. Therefore, the significant beta coefficient substantiates the argument that the process of forming travel intention is an uplifting factor on the emotional state of students and a stress reliever.

H2 assumed that TIS has a positive effect on travel involvement. The extremely high effect ($=0.736$, $p < 0.001$) proves that intention has a substantial influence on engagement. This high beta is in line with the behavioral models, which focus on the translation of intention into cognitive and emotional investment. Similar results were reported by Gan et al. (2023), who found that people who intend to travel pay more attention, put more effort in, and dedicate more emotional energy to the activities related to travel. Therefore, the value of $\beta = 0.736$ is a strong support of H2.

H3 was that travel involvement has a positive impact on SMH. The effect size is not very large ($=0.075$, $p < 0.001$), yet it is statistically significant. This suggests that deeper engagement enhances wellbeing beyond mere intention. Iacob et al. (2024) reasoned that meaningful tourism engagement leads to self-reflection and self-enrichment. Similarly,

Konstantopoulou et al. (2024) established that life satisfaction and positive emotions are enhanced by immersive travel experience. In that way, the hypothesis that active involvement reinforces psychological benefits is justified by empirical evidence.

H4 assumed the positive correlation between TIS and social connectedness. The results reveal a strong and significant effect ($\beta = 0.716, p < 0.001$), indicating that social bonding is significantly stimulated by travel intention. Tourism is a social phenomenon, and in most cases, there is collective experience that promotes belongingness (Su et al., 2023). Diallo et al. (2022) highlighted that travel interactions have a major positive effect on subjective wellbeing due to the relational processes. Therefore, the high beta value ascertains that students who have stronger intentions to travel have high probabilities of developing social relationships.

H5 was that social connectedness has a positive effect on SMH. This assumption is supported by the large coefficient ($\beta = 0.076, p < 0.001$). The existing literature regarding the social wellbeing shows that peer relationships mitigate stress and enhance psychological resilience (Gössling et al., 2021; Konstantopoulou et al., 2024). Moreover, Qu et al. (2025) highlighted how social connection affects mental health, reinforcing the importance of interpersonal bonds and overall quality of life. Therefore, the empirical evidence supports H5, as it proves that the social relations related to travel have a significant impact on the wellbeing of students.

H6 tested the moderating effect of nature connectedness on the relationship between TIS and SMH. The interaction effect is significant and positive ($\beta = 0.024, p = 0.036$), which implies that the psychological advantages of travel intention are higher in students who are more attached to nature. The observation can be affirmed by the Stress Recovery Theory, which argues that natural settings contribute to emotional renewal. (Ma et al., 2025) discovered that nature-based tourism has a significant impact on lessening stress and improving wellbeing.

H7 assumed that travel frequency moderates the TIS-SMH relationship. This was a negative and significant interaction ($\beta = -0.032, p = 0.008$). This moderation effect is empirically justified by a negative beta coefficient.

H8 and H9 tested the effects of mediation. H8 is confirmed by the indirect effect through travel involvement ($\beta = 0.055, p = 0.001$), which proves the intention to improve mental health through more intensive experience. Similarly, H9 is supported by the indirect impact of relational pathways via social connectedness ($\beta = 0.055, p < 0.001$), which implies that the psychological influence of travel intention is further explained by relational pathways. (Vada et al., 2022) emphasized the importance of travel involvement which acts as an intermediary between travel intention and student mental health. In addition, travel intention also positively influences the mental health of students and does so indirectly through social connectedness (Zhuang & Wang, 2024).

Overall, the trend of the beta coefficients proves that travel intention structure is a multidimensional psychological driver. The highest correlations are found between TIS and its mediators ($\beta = 0.736; p = 0.716$), whereas direct and indirect implications on mental health, even though minor, are still statistically significant. Based on the existing behavioral and restorative theories and guided by the previous literature, all the findings allow concluding about the validity of all hypotheses and prove the significant role of tourism in improving student mental health.

Although the results do confirm that there is a positive relationship between travel intention and student mental health, this must be understood in the wider socioeconomic and cultural context of Bangladesh and should not be considered a universal relationship. Travel intention, social connectedness, travel involvement and nature connectedness were found to be beneficial for the psychological wellbeing of students, but they are not equally

distributed. The travel behavior of students in Bangladesh is influenced by contextual factors including the cost of travel, accessibility of domestic tourism opportunities, expectations of family, gender norms, safety concerns, and university culture (Mwale et al., 2022). Although domestic tourism has increased, there remains a large proportion of students that are still financially disadvantaged, and some students, particularly female, may be constrained in terms of their independent travel due to family responsibilities and/or cultural expectations. The structural conditions indicate that unequal access to travel may shape who is able to reap the psychological benefits of travel. In addition, the moderating effect of travel frequency needs to be taken with a grain of salt. While travel may offer repeated chances for stress recovery and psychological restoration, increased travel may also be linked to increased socioeconomic privilege, disposable income, family support, and social capital, and not solely to travel (Mulcahy et al., 2026). Likewise, although social connectedness was found to be an important pathway by which travel intention contributes to mental health, peer networks can also exert pressure to engage in travel, foster social comparison via idealized travel experiences shared via social media, and elicit feelings of not being in the group or fear of missing out (FOMO) for students who do not travel. Furthermore, tourism cannot be assumed to be a process that is inherently transformative, because some travel experiences can perpetuate cultural stereotyping, power disparities, or superficial consumption of a destination. In the context of this study, the positive relationships found are therefore viewed as conditionally mediated outcomes, influenced by factors such as individual motivation as well as the broader economic, social and cultural circumstances.

6. Conclusions

Drawing upon the Theory of Planned Behavior (TPB) and Stress Recovery Theory (SRT), this study develops a comprehensive framework for understanding the relationships between travel intention, travel experiences, and university students' mental health. The findings demonstrate that travel intention is positively associated with students' psychological wellbeing, with travel experiences serving as a significant mediating mechanism. These results suggest that students who are more inclined to engage in travel experiences, particularly socially cohesive excursions, tend to have better psychological wellbeing. Furthermore, the study identifies important boundary conditions underlying these relationships. Nature connectedness strengthens the positive association between travel intention and mental health, supporting the restorative role of natural environments. Interestingly, the moderating role of travel frequency reveals that the strength of this association varies across different levels of travel participation, highlighting the complexity of travel-related wellbeing. Overall, this study contributes to the tourism and wellbeing literature by integrating the TPB and SRT into a unified framework and provides empirical evidence that travel intention, travel experiences, and nature connectedness are positively associated with university students' mental health.

7. Recommendation

7.1. Practical Implications

While there is no definitive evidence of how travel experiences affect psychological wellbeing, a growing body of evidence indicates that travel intentions and experiences are related to psychological wellbeing, thus making it important for education institutions and policy-makers to consider the provision of accessible leisure and nature-based activities as part of a comprehensive student wellbeing strategy. Tourism does not automatically cure everyone's mental health problems; instead, universities and government agencies could promote low-cost, inclusive alternatives like low-cost excursions, university nature experiences, local heritage tours, walking in the park and short domestic trips. Higher edu-

cation institutions, tourism authorities and community groups may be able to collaborate on offering subsidized or discounted recreation programs for students.

Since financial, physical and other factors can impede students' access to travel, institutions should strive to be inclusive and provide alternative ways to achieve restorative and social engagement, for example: campus green spaces, outdoor recreation, a nature-based mindfulness activity, and a community environmental event.

This study at the societal level emphasizes the importance of leisure and nature engagement activities in promoting psychological health. To combat academic strain, social isolation and emotional stress, communities need to foster affordable recreational opportunities to get people together and be in nature. Nature connectedness further reinforces the importance of promoting appreciation of the environment through education, nature protection, and frequent experience of green spaces, which can positively impact wellbeing and sustainability.

7.2. Theoretical Implication

This study explores both the Theory of Planned Behavior (TPB) and Stress Reduction Theory (SRT) to gain a better conceptual insight into the correlation between tourism and the mental health of students. In this context, the TPB and SRT have been merged to reflect the relationship between them, as well as their usage in practical tourism behavior and psychological health explanations. The present study contributes theoretically by demonstrating that the relationship between travel and student mental health is neither direct nor unconditional. Instead, travel intention represents the behavioral pathway through which restorative travel experiences influence psychological outcomes, while social connectedness explains the underlying interpersonal mechanism and nature connectedness and travel frequency define the contextual conditions under which these relationships become stronger. Consequently, the proposed framework extends previous applications of the TPB and SRT by integrating behavioral intention formation with psychological restoration within a single explanatory model. The theoretical implication of the proposed study is to expand the theoretical concept of tourism activities that might aid in enhancing the mental health of students. This research broadens the theoretical framework by incorporating two mediating variables, travel involvement and social connectedness, as well as the Theory of Planned Behavior (TPB) and Stress Recovery Theory (SRT) constructs. These mediators make the model stronger and provide it with a more accurate explanation of how tourism participation can help in enhancing the mental health and wellbeing of students.

The contextual implication of this study explores that the proposed model can be applied and utilized in terms of the given context of this demographic group. Students in South Asian countries are greatly affected by the stress and burden of study without any probable medium of relief. Tourism can be one of the useful methods to alleviate stress and enhance mental health in students in this case. Based on the model created within the current research, tourism is applicable as a feasible solution to enhance the psychological relaxation and wellbeing of students. Furthermore, the combination of the Theory of Planned Behavior (TPB) and Stress Reduction Theory (SRT) offer an effective theoretical framework that explains how tourism activities may help in improving the mental health of students in this region.

8. Limitations and Future Direction of the Study

This study relies on a specific demographic, which is university students, which may limit the generalizability of the findings to other cohorts facing different structural stressors. The demographic profile of the sample also reflects the sociocultural and educational context of Bangladesh. Female students often face comparatively greater family supervision,

mobility restrictions, and safety concerns when participating in leisure travel, which may reduce their representation in travel-related studies. Similarly, the predominance of BBA students partly reflects the accessibility of business schools during data collection and the growing enrollment in business education across Bangladeshi universities. These sample characteristics may limit the generalizability of the findings to students from other academic disciplines and demographic groups. Future research should seek a more balanced representation of gender, academic backgrounds, and institutional types. The use of cross-sectional survey data to evaluate the structural model captures a specific moment in time, limiting the ability to establish definitive longitudinal causality between travel intention and long-term psychological wellbeing. Furthermore, because the study adopted a cross-sectional research design, causal inferences cannot be established. Future longitudinal or experimental research is recommended to examine the temporal stability of these relationships and provide stronger evidence regarding the directionality of the observed associations.

Future research should employ longitudinal or experimental design to track students' mental health trajectories before, during and after travel experiences to establish robust causal interferences. Also, scholars could expand this approach to diversify the integrative framework, such as by working with young people, to observe that therapeutic mechanisms of travel involvement and social connectedness remain consistent across different high-stress groups.

Author Contributions: Conceptualization, S.A., S.K.A. and F.F.S.; methodology, S.A., F.F.S., S.K.A. and K.F.; software, S.K.A.; validation, F.F.S. and S.A.; formal analysis, S.K.A.; investigation, S.K.A. and F.F.S.; resources, F.F.S. and S.A.; data curation, S.K.A.; writing—original draft preparation, S.A., S.K.A., N.R.S.N., K.F., F.A. and S.T.S.; writing—review and editing, S.A., F.F.S., N.R.S.N., K.F., S.K.A. and F.A.; visualization, S.K.A.; supervision, S.A., F.F.S., N.R.S.N., K.F., S.K.A., F.A. and S.T.S.; project administration, S.K.A., K.F. and N.R.S.N. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are not publicly available due to privacy and ethical restrictions related to the protection of participants' confidentiality. The anonymized data may be made available by the corresponding author upon reasonable request, subject to institutional ethical approval and applicable data protection requirements.

Acknowledgments: The authors would like to thank all the students who took part in this study, including attending the Focus Group Discussions (FGDs) and completing the survey questionnaires. They contributed so much to this research in terms of their valuable contribution, time and co-operation in successful completion of this research.

Conflicts of Interest: The authors declare no conflicts of interest.

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