

Impact of travel and recreational activities on stress, happiness, and life satisfaction among university students

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ABSTRACT

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Continuous effort in regular activities depletes resources, leading to fatigue and negative impacts on well-being. In contrast, travel and recreational activities can promote and sustain well-being by providing adequate recovery from these stressors. In the study, thirty-five graduate students participated, selected through purposive sampling. A pre-test-post-test design with a control group was used for the study. The study aimed to assess the effectiveness of participation in travel and recreational activities in reducing stress and enhancing happiness and life satisfaction among university students. The results revealed that stress levels significantly decreased for participants engaging in travel and recreational activity, while happiness and life satisfaction increased. In addition, significant differences were found in post-test scores of outcome variables between groups, even after controlling for pretest scores. The findings suggest that sufficient recovery from the demand of adulthood through travel and leisure activities contributes to well-being. These benefits could enhance student welfare and support the growth of other institutions by promoting healthier adults.

Keywords: traveling; recreational activity; stress; happiness; life satisfaction

1. INTRODUCTION

The effort-recovery model (Meijman and Mulder, 1998) suggests that exertion in a competitive environment stimulates bodily stress systems by depleting one's resources and triggering negative responses (van Hooff et al., 2018), such as fatigue or distress. These negative responses are not harmful if followed by free time or pleasurable activities after work (Meijman and Mulder, 1998; Qian et al., 2014). However, inadequate recovery or lack of pleasurable activities can lead to long-term physical and mental health problems (Devereux et al., 2011; Feldt et al., 2013), particularly, heightened stress among university students (Muhammad et al., 2021; Ooi et al., 2022). This stress is associated with several health risks, including drug abuse, suicide, insomnia, fatigue, arteriosclerosis, diabetes, and poor academic performance

(Downs and Eisenberg, 2012; Inoue, 2014; Ribeiro et al., 2018; Shah et al., 2010; Sharma et al., 2022).

Nowadays, universities are also competitive environments, where high stress levels are a common societal issue affecting students worldwide (Chang et al., 2024). Previous research indicates that more than half of university students experience anxiety and depression due to life stress, particularly in Asian countries (Craggs, 2012; Downs and Eisenberg, 2012). Similarly, 60% of Bangladeshi university students face mental health problems (Hoque, 2015). These issues are linked to lower happiness (King et al., 2014) and life satisfaction (Rogowska et al., 2021) as well as financial strain on the healthcare system (Inoue, 2014). University students who represent the future workforce of society, are increasingly part of a vulnerable group facing ongoing challenges, unhappiness, and psychological problems

(Hoque, 2015). It is crucial to support their mental and physical well-being to lay the foundation for a strong future in society. Universities and relevant authorities must develop strategies to reduce student anxiety and promote better mental health (Chang et al., 2024).

Among several strategies to reduce stress and increase happiness and life satisfaction, a tour that involve traveling and a variety of recreational activities may provide a solution (Ali et al., 2023; Chang et al., 2024; Chen et al., 2016). Traveling refers to the movement of people between distant geographical locations, while recreational activities involve active participation in socially acceptable and energizing activities (e.g., walking, swimming, meditation, playing games, music, and/or dancing) that people engage in during their free time to rejuvenate their bodies and minds, making these activities more exciting and pleasurable (Coleman and Kohn, 2007; World Health Organization, 2010). Both traveling and recreational activities during holidays facilitate optimal positive experience for the tourists by allowing them to “switch off,” spend their time as they choose, visit new places, socialize with new peoples, learn new things, experience freedom from daily constraints, and return home with happy memories (Carmouche and Kelly, 1995; Krippendorf, 1987).

Taking a break has been shown to increase perceived well-being and personal happiness, as it provides people with opportunities to escape their work setting, explore novel experiences, and choose their activities (Fritz and Sonnentag, 2006; Sonnentag and Fritz, 2007). Deci and Ryan (2000) conducted a study on self-determination theory (SDT) that highlighted how desires shape the prerequisites for psychological growth and well-being. An empirical study conducted in the USA revealed socio-psychological motives behind participation in pleasant travel, with relaxation and escape from a mundane environment being top priorities for travelers (Crompton, 1979). The bottom-up spillover theory (Andrews and Withey, 1976), which provides a theoretical basis for the benefits of travel, posits that a functional connection exists between life satisfaction and fulfillment in various area of life, including health, service, family and leisure (Neal et al., 2007; Sirgy et al., 2011).

The experiential learning theory (Kolb, 1984) asserts that experience is transformed into pre-existing mental structures, which in turn change how a person thinks and acts while acquiring knowledge (Sewchuk, 2005). The greater the experiential activity or outdoor learning, the more significant the impact on one's life (Mendenhall et al., 2017). In this context, a systematic literature review of 125 journal articles and textbook chapters, conducted using the PRISMA procedure, content analysis, and thematic coding, examined the relationship between subjective well-being and outdoor activity satisfaction (Pomfret et al., 2023).

A satisfying holiday trip and its associated activities contribute to a stress-free life and increased happiness (Nawijn et al., 2010). In another study, 199 volunteer adult women, purposefully selected from an event hosted by Istanbul Spor Inc., participated assess the impact of regular recreational activities on stress, happiness, and life satisfaction. The results showed that 10 weeks recreational activities reduced perceived stress levels by 33.57% and increased happiness and life satisfaction levels by 20.58% and 14.39%, respectively (Alanoglu et al., 2020).

Similarly, various components of psychological well-being, such as reduced stress (de Bloom et al., 2010; World Health Organization, 2010), increased happiness (Dolnicar et al., 2012; Sirgy et al., 2011), and life satisfaction (Neal et al., 2007), have been shown to improve among travelers who engage in holiday or recreational activities. In contrast, Tarumi et al. (1998) conducted a study on 551 male Japanese white-collar employees, aged 20 to 60, at a manufacturing company to examine the effects of leisure vacations on worker health. Their findings revealed that having fewer vacation days did not significantly affect an individual's well-being. Similarly, Milman (1998) used a pretest-posttest experimental design to examine the impact of travel and tourism experiences based on an escorted tour, on the psychological well-being or happiness of senior travelers. The study found no significant improvements in these outcome variables as a result of the vacation activities and experiences.

Analysis of the theory and previous studies suggests that the relevance of happiness and life satisfaction to a person's well-being depends on the three major resources: psychological, physical, and social, as well as their resilience and coping ability to reduce stress (Deci and Ryan, 2000; Kleiber et al., 2002; Stumbo and Peterson, 2009; Takiguchi et al., 2023). In this context, participation in travel and recreational activities strengthens the resources and abilities of university students (Chang et al., 2024; Krippendorf, 1987), ultimately increasing their happiness and life satisfaction (Dolnicar et al., 2012; Neal et al., 2007; Singleton, 2020; Sirgy et al., 2011). The mechanism by which travel and its activities foster positive outcomes in life is depicted in Figure 1.

Two additional issues inspired the present investigation. First, past research has been conducted with diverse populations in various countries to examine the impact of vacation experience on well-being. These studies have included seniors' travelers, adult consumers of travel services, and individuals at health risk in the USA (Milman, 1998; Neal et al., 2007), employees in Austria and Israel (Etzion, 2003; Strauss-Blasche et al., 2002), holiday and non-holiday takers in the UK (Gilbert and Abdullah, 2004), workers and family caregivers for people with mental illness in Netherland (de Bloom et al., 2010; Pols and Kroon, 2007), family caregivers for individuals with mental disability in Canada (Mactavish et al., 2007), panelists in Australia (Dolnicar et al., 2012), clerks and business travelers in Israel (Westman and Eden, 1997; Westman and Etzion, 2002), and non-academic university employees in Germany (Fritz and Sonnentag, 2006). However, there is lack of studies focusing on adult students in Bangladesh.

Second, after long-term confinement in a home environment during the COVID-19 pandemic, students have faced various mental health issues. When they experience mental anxiety, it can affect their cognitive functioning, which is controlled by the prefrontal cortex (Park and Moghaddam, 2017). In such cases, professional help may be necessary to restore their quality of life (Halpern et al., 1994). Therefore, it is crucial to find an evidence-based solution for reducing stress, increasing happiness, and enhancing life satisfaction among students. This would not only help students become valuable asset to the country's progress but also prevent them from becoming burdens.

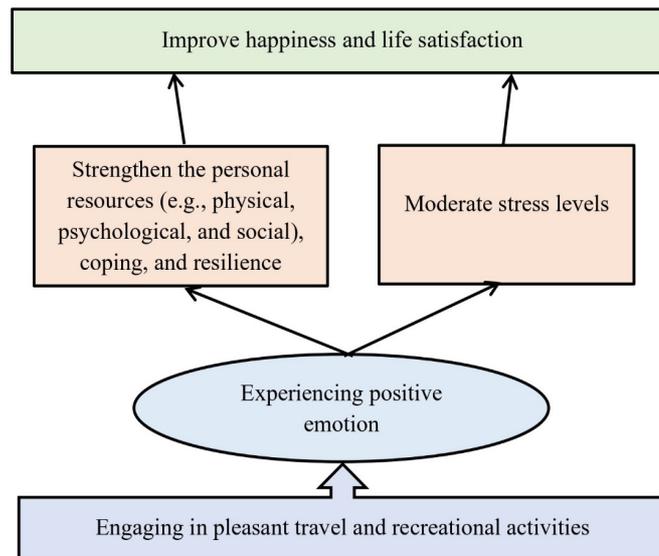


Figure 1. The conceptual framework captures the impact of travel and recreational activities (Han and Patterson, 2007; Krippendorff, 1987)

Analyzing all available evidence reveals that the impact of traveling and recreational activities on the mental health of university students remain unclear, particularly since most studies have been conducted with various participants in different countries outside of Bangladesh, with the exception of adult students. In addition, studies focused on university students have primarily assessed mental health problems or followed qualitative or cross-sectional designs (Ali et al., 2023; Muhammad et al., 2021; Ooi et al., 2022). However, these studies often lack more reliable experimental designs to explore the effect of travel on improving psychological well-being. Considering these issues and focusing on existing theoretical research, the primary aim of this study was to explore the effect of participation in travel and recreational activities on university students' stress, happiness, and life satisfaction.

2. MATERIALS AND METHODS

2.1 Participants

The targeted population for this study was the graduate students of Jagannath University in Bangladesh, one of the largest public universities in the country. Based on the minimum sample size requirement for experimental research, which is 15 participants per group (Brysbart, 2019; Cohen et al., 2017; Delavar, 2016), a total of 35 psychology graduate students (ages ranged between 23 to 26 years, 24.03 ± 0.89 years) from the same academic session were selected as the final sample, after excluding 23 students from the initial recruitment of 58 students (see Figure 2). The exclusion was due to the importance of tour member fit and tour member-leader fit for building rapport and generating positive emotions (Chang et al., 2020).

The sample was selected using a purposive sampling method based on specific inclusion criteria [stress score > 14 (Cohen et al., 1983; Fahim, 2001), happiness score $> 87/29 = 3$ (Hills and Argyle, 2002; Wright, 2004), and life satisfaction score > 20 (Diener et al., 1985)] and exclusion

criteria (i.e., participants who had received psychological services or participated in another tour between the pre- and post-assessment). The participants were divided into two groups: the experimental group ($n = 17$) and the control group ($n = 18$). This targeted sample size was chosen based on statistical considerations, expected participant attrition, and practical factors such as cost (Cohen et al., 2017), including time, money, organizational support, the number of investigators, and available resources. This sample size approach has also been used in other studies (Şahin and Türk, 2021; Shahrokhian et al., 2021; Katoorani et al., 2018). Primary data were collected from November to December 2022.

2.2 Research Design

This study employed a quasi-experimental pretest-posttest design with a control group to explore the effect of travel and recreational activities on stress, happiness, and life satisfaction. The steps of the investigation are illustrated in Figure 2.

2.3 Measures

2.3.1 Personal and demographic information form

The researcher developed a questionnaire package that gathered participants' personal information (e.g., age, gender, current living status, family income, and family structure) and details related to their recreational activities (e.g., walking, swimming, meditation, sightseeing, community activities, playing games, singing, dancing, dining activities, and volunteer work) as described by World Health Organization (2010) and Petersen et al. (2021).

2.3.2 Perceived Stress Scale (PSS)

The 10-item PSS, originally developed by Cohen et al. (1983), measure participants' perceived stress levels. This 5-point Likert scale ranges from "never" to "very often" with the following scoring system: 0 = "never", 1 = "almost never", 2 = "sometimes", 3 = "fairly often", 4 = "very often", whereas 4, 5, 7 and 8 are reversed. Higher

scores indicate greater perceived stress, with scores ranging from 0 to 40. The scale categorized scores into three levels: 0 – 13 (low stress), 14 – 26 (intermediate stress), and 27 – 40 (high stress). Fahim (2001) applied

a standardized translation procedure to the PSS and found, good parallel-form reliability between Bangla and English versions ($\alpha = 0.85$) and test-retest reliability ($r = 0.83$) (Islam, 2020).

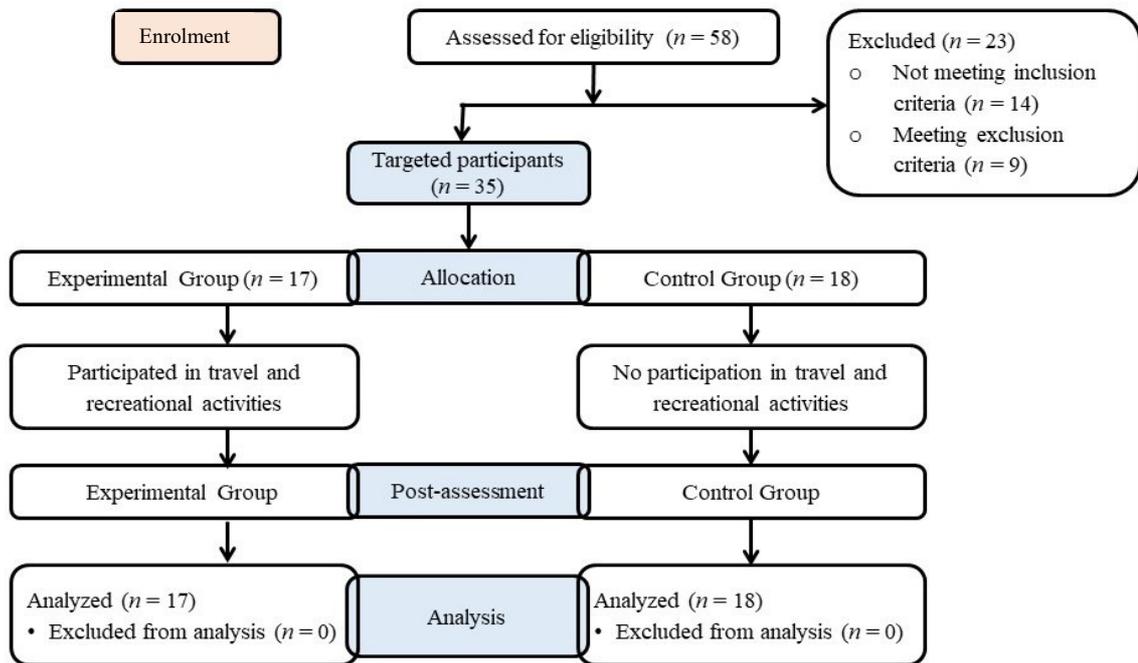


Figure 2. Design and protocol of the study

2.3.3 Oxford happiness questionnaire (OHQ)

The OHQ is a 29-item self-report questionnaire developed by Hills and Argyle (2002) at Oxford University to measure personal happiness. It includes 12 negatively worded items and uses a 6-point Likert-type scale ranging from “strongly disagree” = 1 and “strongly agree” = 6. Higher scores indicate greater happiness. The individual item scores are categorized as follows: 1.00 – 1.99 (not happy), 2.00 – 2.99 (somewhat unhappy), 3.00 – 3.99 (unhappy), 4.00 – 4.49 (moderately happy), 4.50 – 4.99 (pretty happy), 5.00 – 5.99 (very happy), and 6.00 (too happy). The OHQ demonstrated excellent internal consistency, with a Cronbach’s alpha (α) of 0.90 and above (Ahmed et al., 2014).

2.3.4 Satisfaction with life scale (SWLS)

The 7-point SWLS developed by Diener et al. (1985) was used to assess overall life satisfaction. Responses were rated on a 7-point scale from “1” (strongly disagree) to “7” (strongly agree), with higher ratings indicating better life satisfaction. The scale categorized scores into six well-being categories: 30 – 35 (very satisfied), 25 – 29 (satisfied), 20 – 24 (somewhat satisfied), 15 – 19 (slightly dissatisfied), 10 – 14 (unhappy), and 5 – 9 (highly dissatisfied). The SWLS demonstrates excellent test-retest reliability ($r = 0.82$ over two months), and strong internal consistency (Cronbach’s alpha, $\alpha = .87$). It also has good concurrent validity, correlated well with a self-esteem inventory and nine other well-being scales (Diener et al., 1985).

2.4 Travel and recreational activity

A four-day tour was organized to two of the most popular destination in Bangladesh, Cox’s Bazar and Saint Martin. The tour included a variety of transportation method (e.g., train from Dhaka to Chittagong, bus from Chittagong to Teknaf, ship from Teknaf to Saint Martin, and electric boat from Saint Martin to Chhera Island) to ensure comfortable travel between the locations. The recreational activities during the tour encompassed a range of experiences, such as meeting new people, exploring new places, spending quality time with friends and loved ones, engaging in shared hobbies, learning about different cultures, reflecting on life priorities, enjoying personal preferences without external pressure, and savoring delicious food. The primary goal of organizing these travel and recreational activities was to enhance the three core areas of human functioning related to well-being: psychological (fostering self-discovery, self-identification, and personal freedom); physical (improving physical health indicators); and social (building supportive relationships with important people). These activities were designed to promote well-being in pleasurable ways as outlined by Stumbo and Peterson (2009). By actively participating in the tour, university students experienced positive emotions, which helped reduce stress (Han and Patterson, 2007) and improve resilience (Takiguchi et al., 2023) and coping skills. This in turn, enhanced their overall well-being (Kleiber et al., 2002; Singleton, 2020). To ensure the participants had positive experiences, only students who were classmates and comfortable with one another were included in the tour group. In addition, two faculty

members who were friendly and well-liked by the students led the tour. These faculty members were selected based on the students' preferences and focused on maintaining a positive atmosphere, minimizing negative experiences, and encouraging positive emotions throughout the trip (Chang et al., 2020).

2.5 Procedure

Participants were selected based on the inclusion and exclusion criteria, and informed consent was obtained from all participants. Data were collected using questionnaires, included clear instructions for completing them. The students who participated in the tour were assigned to the experimental group, while those who did not participate were assigned to the control group. After completing the baseline assessment, a post-test was conducted approximately one week after the tour to measure the outcome variables. Finally, the researcher expressed gratitude to the participants and proceeded to the next step of the study.

2.6 Data analysis

To ensure the appropriateness of the measures, skewness-kurtosis and Cronbach's alpha (α), were assessed for outcome variables. Descriptive statistics were used to define demographic criteria and to calculate the mean total scores at pre- and post-tests, presenting the comparative changes associated with participation in travel and recreational activities. In the next step, the overall mean total scores for the outcome measures were compared between the two phases with a 95% confidence interval (CI) using a paired sample *t*-test. Finally, ANCOVA was

utilized to compare the outcomes between the two groups while accounting for other factors. Effect sizes (Partial Eta Squared) were computed to indicate the magnitude of change between pre- and post-test. Data analysis was conducted using MS Excel 2021 and IBM SPSS Statistics 25.0.

2.7 Ethical issues

In accordance with the Helsinki Declaration ethical guideline (World Medical Association, 2013), this study was conducted with no participants exposed to potential physical, social, legal, or psychological risks. Participants provided informed consent after being informed about the nature, and objectives of the study, as well as their right to refuse, or withdraw from participation. Additional participants were informed that there would be no financial compensation for participation, though appreciation and gratitude were expressed.

3. RESULTS AND DISCUSSION

3.1 Checking the suitability of measures

The skewness and kurtosis values ranged between 0.05 to 0.51 and -0.29 to -1.24, respectively, indicating that all measurements had a roughly normal distribution (Kline, 2004). In addition, the internal consistency reliability (Cronbach's alpha, α) was found within the acceptable range, ranging from 0.82 and 0.93 (Nunnally, 1978). In addition, the results of the Levene test, conducted prior to applying the parametric test, confirmed the assumption of homogeneity of variances (Table 1).

Table 1. The results of the Levene test for all scales

Scales	Levene	df1	df2	p
Stress scale	0.01	1	33	0.99
Happiness scale	0.49	1	33	0.49
Life satisfaction scale	1.27	1	33	0.27

3.2 Socio-demographics of the participants and testing groups' homogeneity

First, the participants' profiles are presented in Table 2, which showed that more than half of the participants in the experimental and control groups (76% and 55.6%, respectively). The majority of participants came from low-income (29.4% and 50%) and middle-income (52.9% and 44.4%) families. Additionally, more than one-third of the participants in both groups belonged to nuclear families (76.5% and 83.3%, respectively) and approximately half of the participants in each group lived with their families. Finally, there were no significant differences in stress, happiness, and life satisfaction based on demographic factors, except for gender's effect on life satisfaction. The participants' characteristics in both groups were similar in proportions, indicating equivalency between the two groups.

Furthermore, in the baseline assessment, the mean score for stress ($M = 20.03$) and life satisfaction ($M = 20.00$) indicated moderate stress and dissatisfaction with life among the university students (Cohen et al., 1983; Sagar and Karim, 2014), while the mean scores of happiness scale ($M = 3.97$) indicated unhappiness among them (Hills and Argyle, 2002).

3.3 Participation in travel-recreational activity and well-being

To compare the mean difference in stress, happiness, and life satisfaction between the experimental and control groups in the pre-test and post-test, MS Excel was used for graphical visualization. Figure 3 shows that the level of stress in the experimental group significantly decreased compared to the control group from the pre-test ($M = 19.35$) to the post-test ($M = 16.31$). In addition, the happiness level increased from the pre-test ($M = 118.35$) to the post-test ($M = 124.88$), and life satisfaction also showed a noticeable improvement from the pre-test ($M = 20.06$) to the post-test ($M = 22.29$) among university students in the experimental group. In the control group, however, these levels slightly decreased.

Moreover, paired-sample *t*-tests were conducted to assess whether the mean differences for the experimental group were statistically significant. As shown in Table 3, students who participated in travel and recreational activities experienced a significant reduction in stress from the pre-test to the post-test ($t = 3.36, p < 0.01$) and a significant improvement in happiness ($t = -2.44, p < 0.05$). However, the increase in flow between the pre- and post-test was not statistically significant.



Table 2. Profile of the participants and testing homogeneity of the participants of groups

Socio-demographic factors		Experimental group (n = 17)	Control group (n = 18)	F/t		
		f (%)	f (%)	Stress	Happiness	Life satisfaction
Gender	Male	13 (76.5)	10 (55.6)	-1.27	0.84	2.14*
	Female	4 (23.5)	8 (44.4)			
Family income	Low	5 (29.4)	9 (50.0)	0.09	1.14	0.04
	Medium	9 (52.9)	8 (44.4)			
	High	3 (17.6)	1 (5.6)			
Family pattern	Nuclear	13 (76.5)	15 (83.3)	0.59	-0.22	-0.89
	Joint	4 (23.5)	3 (16.7)			
Living pattern	With family	9 (52.9)	9 (50.0)	1.10	-1.06	-1.32
	Without family	8 (47.1)	9 (50.0)			

Note: *p < .05

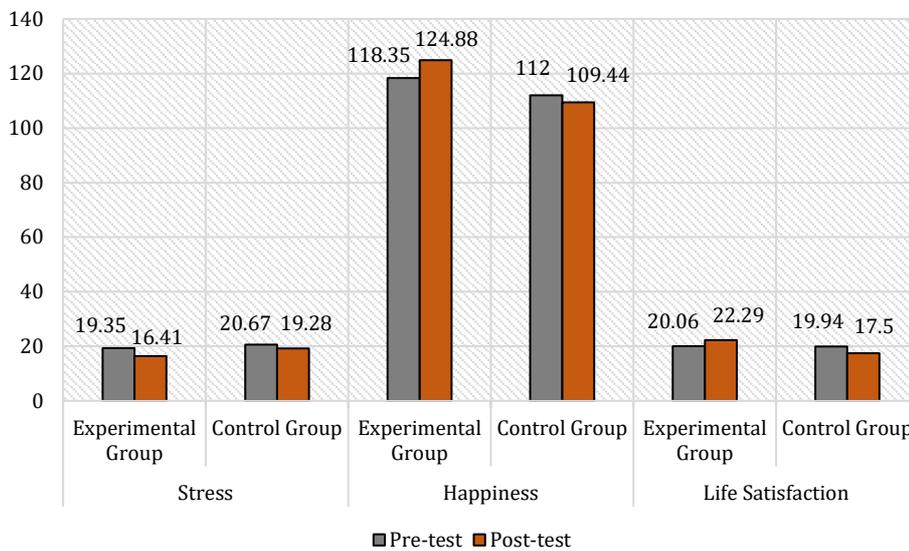


Figure 3. Pre-test and post-test comparisons of experimental and control groups on stress, happiness, and life satisfaction

Table 3. Paired-sample t-test for stress, happiness, and life satisfaction between pre-test and post-test in the experimental group

Outcome variable	Mean (SD)	Standard error mean	95% Confidence interval of the difference		t	df	p
			Lower	Upper			
Stress	2.94 (3.61)	0.88	1.08	4.80	3.36	16	0.004
Happiness	-6.53 (11.02)	2.67	-12.19	-0.86	-2.44	16	0.027
Life satisfaction	-2.23 (7.68)	1.86	-6.19	1.72	-1.20	16	0.248

Lastly, a one-way ANCOVA was conducted to compare the effectiveness of the two groups. Table 4 revealed that, after controlling for the pre-test scores of happiness and life satisfactions separately, significant differences were found in the post-test scores for happiness [$F(1, 32) = 8.50, p < 0.05$] and life satisfaction [$F(1, 32) = 4.71, p < 0.05$] between the two groups. This suggests that participation

in travel and recreational activities had a significant effect on happiness and life satisfaction in the experimental group. Specifically, 21.0% and 12.8% of the variance in the post-test scores for happiness and life satisfaction, respectively, can be attributed to the impact of these activities. However, no significant difference was found in the post-test stress score.

Table 4. Analysis of covariance (ANCOVA) for post-test scores in experimental and control groups, controlling for pre-test scores of stress, happiness, and life satisfaction

Outcome variables	Source	Type III sum of squares	df	Mean square	F	p	Partial eta squared
Stress	Pre-test (covariate)	1086.17	1	1086.17	74.34	0.001	0.70
	Group	29.36	1	29.36	2.01		0.06
	Error	467.56	32	14.61			
Happiness	Pre-test (covariate)	10865.06	1	10865.06	115.85	0.001	0.78
	Group	796.93	1	796.93	8.50	0.006	0.21
	Error	3001.15	32	93.79			
Life satisfaction	Pre-test (covariate)	873.35	1	873.35	21.10	0.001	0.40
	Group	194.93	1	194.93	4.71	0.038	0.13
	Error	1324.68	32	41.40			

4. DISCUSSION

The aim of the study was to assess the effectiveness of participation in travel and recreational activities on mental wellness of university students, highlighting the important of such activities in society. Following ethical standards, data were collected in two phases and analyzed using both descriptive and inferential statistics. The baseline assessment showed that the psychometric properties of all measures were satisfactory, indicating that the tools used were appropriate for the targeted participants. Initially, it was observed that Bangladeshi university students exhibited a notably poor status in term of perceived stress, unhappiness, and life dissatisfaction. This aligns with several past studies, which found that more than half of adults experience psychological issues and lower level of happiness or life satisfaction (Hoque, 2015; Muhammad et al., 2021; Ooi et al., 2022; Rogowska et al., 2021).

The present study found that students who participated in travel and recreational activities reported a significant reduction in stress levels compared to those who did not participate. Travel provided emotional relief (Hruska et al., 2020), and physically calming the body may help reduce psychological stress and tension, contributing to mental relaxation (Scott, 2024). These findings align with a longitudinal study of 96 Dutch employees, which reported a reduction in mood and stress levels during holidays (de Bloom et al., 2010). Other studies have also shown that taking a vacation work can reduce stress and burnout among various professionals, including industrial workers, clerks, and employees (Etzion, 2003; Westman and Eden, 1997; Westman and Etzion, 2002).

In term of happiness, the study concluded that university students who actively participated in travel and recreational activities experienced significantly higher levels of happiness compared to students who did not participate. In addition, this difference in happiness remain significant even after controlling the pre-test score, further confirming the positive impact of travel and recreational activities on happiness among students. This effect is likely due to the happiness derived from relaxing or engaging in new and challenging experiences during travel (Kawakubo and Oguchi, 2022). These findings are consistent with previous studies on tourists, which found that individuals who engaged in more activities reported

greater happiness than those who engaged in fewer activities (Milman, 1998; Singleton, 2020).

Similarly, university students who actively participated in travel and recreational activities showed a slight increase in life satisfaction. Significant differences in post-test life satisfaction scores were observed between the two groups, even after controlling for the pre-test scores, indicating that participation in travel and recreational activities positively influenced life satisfaction. This conclusion aligns partially with a model by Neal et al. (2007), which suggests that life satisfaction is influenced by the extent to which satisfaction with leisure activities, such as travel and tourism, “spills” into broader life domains. Additionally, Lounsbury and Hoopes (1986) found that a vacation from work increased the life satisfaction of 92 female employees and 36 male employees (average age 39 years) across various positions.

The mechanism behind these findings is that university students face insufficient recovery from their continuous workload while preparing for competitive exams and a stable future career, which obstruct creativity and positive emotions. However, during vacations, they receive adequate recovery from this workload. As a result, their cognitive flexibility, and originality improve after the vacation (de Bloom et al., 2014), contributing to increased stress relief, happiness, and life satisfaction. Previous studies have also shown that taking a vacation from regular work can reduce stress, fatigue, and absenteeism (de Bloom et al., 2010; Etzion, 2003; Kühnel and Sonnentag, 2011). Additionally, engaging in regular physically active leisure activities positively impacts mental health (Eskiler et al., 2019). Similarly, when students participated in a tour, they experienced greater satisfaction with their lives. Therefore, such opportunities to take a break from one’s stressful routine are essential for maintaining life satisfaction.

In contrast, a significant difference in stress was observed between the pre-test and post-test (Table 3). However, after controlling for the pretest score, no significant difference was found between the post-test score of the two groups (Table 4). One possible explanation is that life encompasses various domains (e.g., social, recreational, family, cultural, physical, and emotional well-being, career, and financial aspects) that cannot be fully changed by the short-term experiences of a single tour.

In addition, the duration of visit affects the relationship between satisfaction with travel or tourism services, which in turn may influence changes in outcome variables (de Bloom et al., 2010; Neal et al., 2007). Similarly, Alanoglu et al. (2020) found in a study of 199 volunteer adult women that those who regularly engaged in fitness and recreational activities for 10 weeks showed improvement in happiness, life satisfaction, and stress relief.

Lastly, similar to university students, there are other sectors of people with the same age group who face various life challenges. For these individuals, holiday activities should be incorporated to enhance their mental well-being, which in turn improve their ability to cope with life's difficulties (Enzensberger, 1996; Ragheb and Beard, 1982). These activities align with institutional goals by providing individuals an opportunity to take a break from their work and alleviate the stresses of the daily life (Hruska et al., 2020). Engaging in recreational activities twice a week has been shown to contribute to higher levels of happiness and life satisfaction compared to physical activities performed three times a week (Alanoglu et al., 2020). Similarly, individuals who travel regularly tend to report greater life satisfaction than those who seldom take breaks (Chen et al., 2021). Without regular break from work, individuals may experience disruptions in their psychophysiological systems, potentially lead to long-term physical and psychological health issues (Devereux et al., 2011; Feldt et al., 2013) or even requiring medical intervention to regain their ability to work in everyday life (Halpern et al., 1994).

Nevertheless, the study had several limitations. It was conducted at a single university in Bangladesh with a relatively small sample size. In addition, the data on mental health and travel satisfaction were self-reported, relying on participants' perceptions, which introduces the potential for response bias. Despite these limitations, the study provides valuable insights into the role of travel and recreational activities in promoting mental well-being.

5. CONCLUSION

Adults can lead more fulfilling live by maintaining good health, as engaging in travel and recreational activities is essential for relieving daily stress, fostering happiness, and cultivating contentment. These findings, along with previous studies, highlight the importance of travel programs in promoting mental well-being, providing valuable guidance for researchers and practitioners. Further research is necessary to explore the long-term effects of different leisure activities across diverse target groups, with follow-up assessments to evaluate their impact on health and well-being in broader contexts.

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REFERENCES

- Ahmed, F., Raju, Md. A., and Islam, A. S. M. A. (2014). The relationship of happiness and depression with self-control. *Jagannath University Journal of Psychology*, 4(1), 63–69.
- Alanoglu, S., Isik, O., and Ayhan, C. (2020). The effect of regular recreational activities on adult women's stress, happiness, and life satisfaction levels. *Progress in Nutrition*, 22(Suppl. 2), e2020030.
- Ali, M., Macioszek, E., and Dharmowijoyo, D. B. E. (2023). Influence of activity-travel participation, travel mode choice, and multitasking activities on subjective well-being using R. *Sustainability*, 15(23), 16338.
- Andrews, F. M., and Withey, S. B. (1976). *Social Indicators of Well-Being: American's Perceptions of Life Quality*, New York, NY: Plenum Press.
- Brybaert, M. (2019). How many participants do we have to include in properly powered experiments? A tutorial of power analysis with reference tables. *Journal of Cognition*, 2(1), 16.
- Carmouche, R., and Kelly, N. (1995). *Behavioral Studies in Hospitality Management*. London: Chapman & Hall.
- Chang, S.-Y., Tsaur, S.-H., Yen, C.-H., and Lai, H.-R. (2020). Tour member fit and tour member-leader fit on group package tours: Influences on tourists' positive emotions, rapport, and satisfaction. *Journal of Hospitality and Tourism Management*, 42, 235–243.
- Chang, W.-Y., Wang, X., Guo, D.-S., Nguyen, L.-H.-P., Tran, N.-H., Yang, S.-J., Lin, H.-Z., Wu, H.-C., and Huang, C.-F. (2024). Explore the effects of forest travel activities on university students' stress affection. *Frontiers in Psychology*, 14, 1240499.
- Chen, C.-C., Petrick, J. F., and Shahvali, M. (2016). Tourism experiences as a stress reliever: Examining the effects of tourism recovery experiences on life satisfaction. *Journal of Travel Research*, 55(2), 150–160.
- Chen, C.-C., Zou, S., and Petrick, J. F. (2021). Would you be more satisfied with your life if you travel more frequently? *Tourism Analysis*, 26(1), 57–63.
- Cohen, L., Manion, L., and Morrison, K. (2017). *Research Methods in Education*, 8th, London: Routledge.
- Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385–396.
- Coleman, S., and Kohn, T. (2007). *The Discipline of Leisure: Embodying Cultures of 'Recreation': Social Identities Volume 4*, New York: Berghahn Books.
- Craggs, S. (2012). *One-third of McMaster students battle depression: Survey*. CBC News. [Online URL: <https://www.cbc.ca/news/canada/hamilton/headlines/one-third-of-mcmaster-students-battle-depression-survey-1.1200815>] accessed on August 10, 2024.
- Crompton, J. L. (1979). Motivations for pleasure vacation. *Annals of Tourism Research*, 6(4), 408–424.
- de Bloom, J., Geurts, S. A. E., Taris, T. W., Sonnentag, S., de Weerth, C., and Kompier, M. A. J. (2010). Effects of vacation from work on health and well-being: Lots of fun, quickly gone. *Work & Stress*, 24(2), 196–216.
- de Bloom, J., Ritter, S., Kühnel, J., Reinders, J., and Geurts, S. (2014). Vacation from work: A 'ticket to creativity'? The effects of recreational travel on cognitive flexibility and originality. *Tourism Management*, 44, 164–171.
- Deci, E. L., and Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Delavar, A. (2016). Research methods in psychology and educational sciences. *Tehran: Roshd*, 99–100.

- Devereux, J. J., Rydstedt, L. W., and Cropley, M. (2011). Psychosocial work characteristics, need for recovery and musculoskeletal problems predict psychological distress in a sample of British workers. *Ergonomics*, 54(9), 840–848.
- Diener, E., Emmons, R. A., Larsen, R. J., and Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75.
- Dolnicar, S., Yanamandram, V., and Cliff, K. (2012). The contribution of vacations to quality of life. *Annals of Tourism Research*, 39(1), 59–83.
- Downs, M. F., and Eisenberg, D. (2012). Help-seeking and treatment use among suicidal college students. *Journal of American College Health*, 60(2), 104–114.
- Enzensberger, H. M. (1996). A theory of tourism. *New German Critique*, 68, 117–135.
- Eskiler, E., Yildiz, Y., and Ayhan, C. (2019). The effect of leisure benefits on leisure satisfaction: Extreme sports. *Turkish Journal of Sport and Exercise*, 21(1), 16–20.
- Etzion, D. (2003). Annual vacation: Duration of relief from job stressors and burnout. *Anxiety, Stress, & Coping*, 16(2), 213–226.
- Fahim, Y. (2001). How stressful of your life stress. *The Dhaka University Journal of Psychology*, 25, 24–27.
- Feldt, T., Huhtala, M., Kinnunen, U., Hyvönen, K., Mäkikangas, A., and Sonnentag, S. (2013). Long-term patterns of effort-reward imbalance and over-commitment: Investigating occupational well-being and recovery experiences as outcomes. *Work & Stress*, 27(1), 64–87.
- Fritz, C., and Sonnentag, S. (2006). Recovery, well-being, and performance-related outcomes: The role of workload and vacation experiences. *Journal of Applied Psychology*, 91(4), 936–945.
- Gilbert, D., and Abdullah, J. (2004). Holiday taking and the sense of well-being. *Annals of Tourism Research*, 31(1), 103–121.
- Halpern, C., Close, D., and Johnson, K. (1994). *Truth in Comedy: The Manual of Improvisation*, Colorado: Meriwether Publishing.
- Han, J. S., and Patterson, I. (2007). An analysis of the influence that leisure experiences have on a person's mood state, health, and wellbeing. *Annals of Leisure Research*, 10(3-4), 328–351.
- Hills, P., and Argyle, M. (2002). The Oxford happiness questionnaire: A compact scale for the measurement of psychological well-being. *Personality and Individual Differences*, 33(7), 1073–1082.
- Hoque, R. (2015). Major mental health problems of undergraduate students in a private university of Dhaka, Bangladesh. *European Psychiatry*, 30(Suppl. 1), 1880.
- Hruska, B., Pressman, S. D., Bendinskas, K., and Gump, B. B. (2020). Vacation frequency is associated with metabolic syndrome and symptoms. *Psychology & Health*, 35(1), 1–15.
- Inoue, N. (2014). Stress and atherosclerotic cardiovascular disease. *Journal of Atherosclerosis and Thrombosis*, 21(5), 391–401.
- Islam, M. N. (2020). Psychometric properties of the Bangla version of PSS-10: Is it a single-factor measure or not? *Hellenic Journal of Psychology*, 17(1), 15–34.
- Katoorani, S. M., Ahmadian, H., and Alizadeh, N. S. (2018). Evaluate the effectiveness of cognitive-behavioral therapy on emotion regulation and cognitive processing in patients with MDD. *European Journal of Behavioral Sciences*, 1(2), 1–11.
- Kawakubo, A., and Oguchi, T. (2022). What promotes the happiness of vacationers? A focus on vacation experiences for Japanese people during winter vacation. *Frontiers in Sports and Active Living*, 4, 872084.
- King, K. A., Vidourek, R. A., Merianos, A. L., and Singh, M. (2014). A study of stress, social support, and perceived happiness among college students. *The Journal of Happiness & Well-Being*, 2(2), 132–144.
- Kleiber, D. A., Hutchinson, S. L., and Williams, R. (2002). Leisure as a resource in transcending negative life events: Self-protection, self-restoration, and personal transformation. *Leisure Sciences*, 24(2), 219–235.
- Kline, R. B. (2004). *Principles and Practice of Structural Equation Modeling*, 2nd, New York: Guilford Press.
- Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. New Jersey: Prentice-Hall.
- Krippendorf, J. (1987). *The Holiday Makers: Understanding the Impact of Leisure and Travel*. Oxford: Butterworth-Heinemann.
- Kühnel, J., and Sonnentag, S. (2011). How long do you benefit from vacation? A closer look at the fade-out of vacation effects. *Journal of Organizational Behavior*, 32(1), 125–143.
- Lounsbury, J. W., and Hoopes, L. L. (1986). A vacation from work: Changes in work and nonwork outcomes. *Journal of Applied Psychology*, 71(3), 392–401.
- Mactavish, J. B., MacKay, K. J., Iwasaki, Y., and Betteridge, D. (2007). Family caregivers of individuals with intellectual disability: Perspectives of life quality and the role of vacations. *Journal of Leisure Research*, 39(1), 127–155.
- Meijman, T. F., and Mulder, G. (1998). Psychological aspects of workload. In *Handbook of Work and Organizational Psychology Volume 2: Work Psychology* (Drenth, P. J. D. Thierry, H., and de Wolff, C. J., Eds.), 2nd, pp. 5–34. East Sussex, UK: Psychology Press.
- Mendenhall, M. E., Osland, J. S., Bird, A., Oddou, G. R., Stevens, M. J., Maznevski, M. L., and Stahl, G. K. (2017). *Global Leadership: Research, Practice, and Development*, 3rd, New York: Routledge, p. 432.
- Milman, A. (1998). The impact of tourism and travel experience on senior travelers' psychological well-being. *Journal of Travel Research*, 37(2), 166–170.
- Muhammad, N., Rathi, S. R., and Baroi, B. (2021). Psychological health among undergraduate students of private and public universities: A comparative study in Bangladesh. *The International Journal of Indian Psychology*, 9(4), 1263–1273.
- Nawijn, J., Marchand, M. A., Veenhoven, R., and Vingerhoets, A. J. (2010). Vacationers happier, but most not happier after a holiday. *Applied Research in Quality of Life*, 5(1), 35–47.
- Neal, J. D., Uysal, M., and Sirgy, M. J. (2007). The effect of tourism services on travelers' quality of life. *Journal of Travel Research*, 46(2), 154–163.
- Nunnally, J. C. (1978). *Psychometric Theory*, 2nd, New York: McGraw-Hill.
- Ooi, P. B., Khor, K. S., Tan, C. C., and Ong, D. L. T. (2022). Depression, anxiety, stress, and satisfaction with life: Moderating role of interpersonal needs among university students. *Frontiers in Public Health*, 10, 958884.

- Park, J., and Moghaddam, B. (2017). Impact of anxiety on prefrontal cortex encoding of cognitive flexibility. *Neuroscience*, 345, 193–202.
- Petersen, C. B., Bekker-Jepesen, M., Aadahl, M., and Lau, C. J. (2021). Participation in recreational activities varies with socioeconomic position and is associated with self-rated health and well-being. *Preventive Medicine Reports*, 24, 101610.
- Pols, J., and Kroon, H. (2007). The importance of holiday trips for people with chronic mental health problems. *Psychiatric Services*, 58(2), 262–265.
- Pomfret, G., Sand, M., and May, C. (2023). Conceptualising the power of outdoor adventure activities for subjective well-being: A systematic literature review. *Journal of Outdoor Recreation and Tourism*, 42, 100641.
- Qian, X. L., Yarnal, C. M., and Almeida, D. M. (2014). Does leisure time moderate or mediate the effect of daily stress on positive affect? An examination using eight-day diary data. *Journal of Leisure Research*, 46(1), 106–124.
- Ragheb, M. G., and Beard, J. G. (1982). Measuring leisure attitudes. *Journal of Leisure Research*, 14(2), 155–167.
- Ribeiro, Í. J. S., Pereira, R., Freire, I. V., de Oliveira, B. G., Casotti, C. A., and Boery, E. N. (2018). Stress and quality of life among university students: A systematic literature review. *Health Professions Education*, 4(2), 70–77.
- Rogowska, A. M., Ochnik, D., Kuśnierz, C., Jakubiak, M., Schütz, A., Held, M. J., Arzenšek, A., Benatov, J., Berger, R., Korchagina, E. V., Pavlova, I., Blažková, I., Konečná, Z., Aslan, I., Çınar, O., and Cuero-Acosta, Y. A. (2021). Satisfaction with life among university students from nine countries: Cross-national study during the first wave of COVID-19 pandemic. *BMC Public Health*, 21(1), 2262.
- Sagar, M. M. H., and Karim, A. K. M. R. (2014). The psychometric properties of satisfaction with life Scale for police population in Bangladeshi culture. *The International Journal of Social Sciences*, 28(1), 24–31.
- Şahin, H., and Türk, F. (2021). The impact of cognitive-behavioral group psycho-education program on psychological resilience, irrational beliefs, and well-being. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 39, 672–694.
- Scott, E. (2024). *How to relax your body and mind*. Very Well Mind. [Online URL: <https://www.verywellmind.com/how-to-relax-physically-and-emotionally-3144472>] accessed on August 21, 2024.
- Sewchuk, D. H. (2005). Experiential learning — A theoretical framework for perioperative education. *AORN Journal*, 81(6), 1311–1318.
- Shah, M., Hasan, S., Malik, S., and Sreeramareddy, C. T. (2010). Perceived stress, sources and severity of stress among medical undergraduates in a Pakistani medical school. *BMC Medical Education*, 10, 2.
- Shahrokhian, N., Hassanzadeh, S., Razini, H. H., and Ramshini, M. (2021). The effects of cognitive-behavioral therapy (CBT) in well-being and perceived stress in adolescents with low academic performance during the COVID-19 pandemic. *International Journal of Sport Studies for Health*, 4(2), e122504.
- Sharma, K., Akre, S., Chakole, S., and Wanjari, M. B. (2022). Stress-induced diabetes: A review. *Cureus*, 14(9), e29142.
- Singleton, P. A. (2020). Exploring the positive utility of travel and mode choice: Subjective well-being and travel-based multitasking during the commute. In *Mapping the Travel Behavior Genome* (Goulias, K. G., and Davis, A. W., Eds.), pp. 259–277. Amsterdam: Elsevier.
- Sirgy, M. J., Kruger, P. S., Lee, D.-J., and Yu, G. B. (2011). How does a travel trip affect tourists' life satisfaction? *Journal of Travel Research*, 50(3), 261–275.
- Sonnentag, S., and Fritz, C. (2007). The recovery experience questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology*, 12(3), 204–221.
- Strauss-Blasche, G., Ekmekcioglu, C., and Marktl, W. (2002). Moderating effects of vacation on reactions to work and domestic stress. *Leisure Sciences*, 24(2), 237–249.
- Stumbo, N. J., and Peterson, C. A. (2009). *Therapeutic Recreation Program Design: Principles and Procedures*, 5th, San Francisco: Pearson Benjamin Cummings.
- Takiguchi, Y., Matsui, M., Kikutani, M., and Ebina, K. (2023). The relationship between leisure activities and mental health: The impact of resilience and COVID-19. *Applied Psychology: Health and Well-being*, 15(1), 133–151.
- Tarumi, K., Hagihara, A., and Morimoto, K. (1998). An investigation into the effects of vacations on the health status in male white-collar workers. *Environmental Health and Preventive Medicine*, 3(1), 23–30.
- van Hooff, M. L. M., Flaxman, P. E., Söderberg, M., Stride, C. B., and Geurts, S. A. E. (2018). Basic psychological need satisfaction, recovery state, and recovery timing. *Human Performance*, 31(2), 125–143.
- Westman, M., and Eden, D. (1997). Effects of a respite from work on burnout: Vacation relief and fade-out. *Journal of Applied Psychology*, 82(4), 516–527.
- Westman, M., and Etzion, D. (2002). The impact of short overseas business trips on job stress and burnout. *Applied Psychology: An International Review*, 51(4), 582–592.
- World Health Organization. (2010). *Community-Based Rehabilitation: CBR Guidelines*, Geneva: WHO Press.
- World Medical Association. (2013). World medical association declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA*, 310(20), 2191–2194.
- Wright, L. J. M. (2004). Preserving the value of happiness in primary school physical education. *Physical Education & Sport Pedagogy*, 9(2), 149–163.