



## Exploring the Impact of Mountain Hiking Trips in Egypt on the Mental Health of Travelers

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### Abstract

The growing global interest in mental health has positioned it as a pivotal area of recent academic research, particularly within the field of tourism. In this context, hiking has emerged as a valuable form of nature-based tourism, which has the ability to offer tourists physical, mental, and spiritual benefits. Accordingly, the study aims to investigate the potential of hiking trips in Egypt to enhance the three core domains of mental health: emotional, social, and psychological well-being. A quantitative approach was adopted, utilizing statistical tests including Spearman Correlation Coefficient and linear regression analysis on a sample of 327 Egyptian and foreign individuals who actively engage in mountain hiking tours in Egypt. Additionally, the primary method of data collection is a questionnaire that is structured based on Keyes's (2008) model of mental health. The model was adapted to suit the present study in order to evaluate the mental well-being of participants after hiking trips in Egypt. The results reveal that there is a weak yet positive correlation between frequent participation in hiking trips and enhanced mental health. Besides, the quality of the hiking experience, especially in terms of safety and organizational effectiveness, is considered a significant moderator of the relationship between participation in hiking and improvements in mental health dimensions. Based on the findings, the study provides practical recommendations for tourism authorities, tour operators, and mental health practitioners to strengthen the role of hiking experiences in promoting mental well-being in Egypt.

### 1. Introduction

Across centuries, walking has always been a source of recreation that can enhance the spirit and positively affect general health. Hiking is a form of walking conducted on unpaved terrains, such as valleys, mountains, or any other natural environment. Hence, hiking can be referred to as a traditional form of tourism recreational activity in mountain and nature-based

areas (Chhetri et al., 2004). It can also be considered a subcategory of adventure and sports tourism (Breedie, 2003; Den Breejen, 2007).

Hiking is also a type of leisure activity that is usually organized by outdoor organizations along with expert guides and various arrangements to ensure satisfaction (Leister, 2019). Additionally, it is related to other physical tourism activities such as rock climbing and camping (Moir et al., 2021). According to the UNWTO (2019), hiking is a promising element in the tourism product across the world. Thus, many tour operators worldwide are considering including hiking tours among their programs.

On the other hand, mental health can be defined as the condition through which individuals can adapt to stress, life and work difficulties, and then function properly and efficiently in work and community (World Health Organization, 2022). As mentioned previously, hiking has positive impacts on general health, and since mental health is a fundamental element of an individual's general health condition, hiking can improve both physical and mental health (Korkeila, 2000; Nordbø & Prebensen, 2015). Also, it can be referred to as the result of the interaction between the individual and the surrounding environment, giving that it is affected by psychosocial, social, biological, and cultural factors (Korkeila, 2000).

In recent years, there has been a growing concern among travelers about activities and trips that are designed to enhance their well-being (Smith & Puczko, 2014; She et al, 2019; Molokáč et al., 2022). Therefore, various destinations are increasingly interested in designing programs that can enhance mental health. Furthermore, several academic studies, Caldwell (2005), Coghlan (2015), Berbekova and Uysal (2021), Dini and Pencarelli (2022), Buckley (2023), Chen et al. (2024), Gedecho and Kim (2025), and Valente-Mosqueda et al. (2025), have focused on the well-being of travelers and their relationship to travel experience, emphasizing the impact of tourism on the tourists' physical and mental health. However, studies that investigated the impact of hiking tours on mental health are considered rare, especially in Egypt.

Consequently, the research problem can be summarized as follows: Despite the increasing interest among travelers in participating in mountain hiking tours in Egypt, there is a lack of clear empirical evidence that such tours can enhance their emotional, social, and psychological well-being. It is notable that most of the existing research focuses on other types of tourism activities rather than hiking specifically. Furthermore, most of the prior academic analysis tends to examine general wellness, not the core dimensions of mental health.

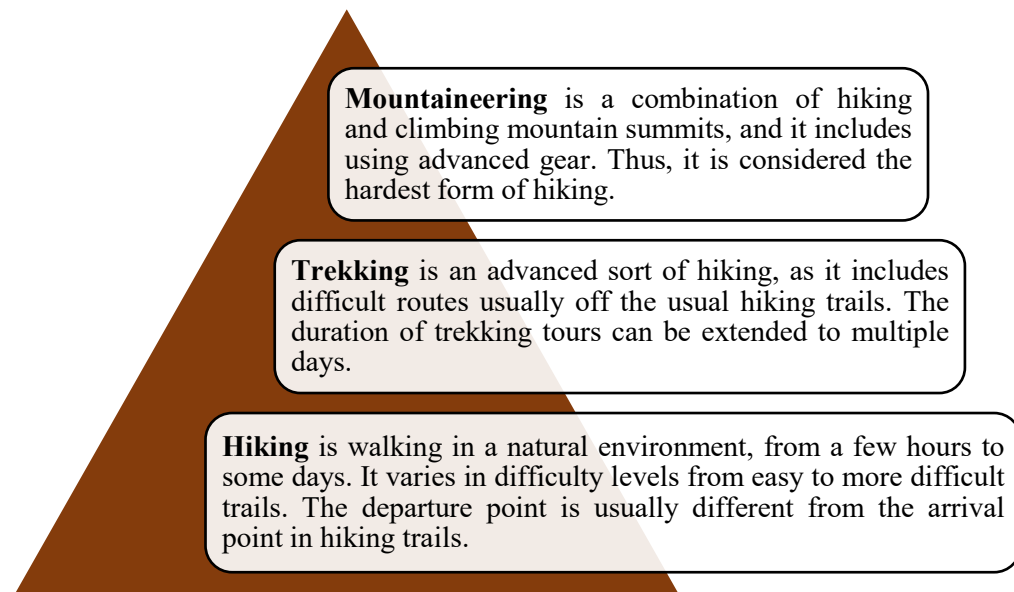
In this regard, the contribution of the study lies in filling the knowledge gap by exploring the possible impacts and relationships between mountain hiking tours in Egypt and the mental health of travelers. Accordingly, it aims to provide deeper insights into hiking tours within the Egyptian context and their influence on the emotional, social, and psychological well-being of travelers. The specific focus on mountain hiking tours stems from the physical and psychological challenges that mountainous environments can present, which may contribute to shaping their mental health.

This can be achieved through a statistical analysis based on Keyes's (2008) model of mental health to explore the possible correlations between frequent participation in hiking activities and the emotional, social, and psychological well-being of travelers. Furthermore, the study analyzes the effect of moderator variables like the difficulty level of hiking trails, the duration of hiking trips, and the quality of the hiking experience. The research hypotheses are formulated through the conceptual model.

## 2.Literature review

### 2.1 The Theoretical Foundation of Hiking

Hiking can be defined as a physical activity through which the participant or the hiker walks long, medium, or short trails in rural or mountainous areas (Nordbø et al.,2014). It aims to gain both physical fitness and recreation (Britannica, 2020). It is considered a popular activity in Europe, especially in the United Kingdom and Germany (Moira et al.,2021). There is an intersection between the terms of hiking, trekking, and mountaineering. Therefore, figure 1 illustrates the differences between them based on the classification of Moira et al. (2021).



**Figure (1) Hiking, trekking, and mountaineering**

Source: *Developed based on Moira et al. (2021)*

Hiking usually occurs in a natural setting with a unique trail for a duration from hours to a few days (Leister, 2019). It is also considered a great opportunity to see unique and endangered species of creatures and plants (Naude, 2018). Hiking can be practiced without training, while advanced forms of it, like trekking and mountaineering, require intense preparation (European Commission, 2021). The International Association of Mountaineering clarified that the level of difficulty of hiking is usually determined by the length of the trail and the challenging spots that require advanced physical ability during the hike. Hiking includes trails that are considered well-defined with a low to medium level of difficulty that requires a minimum level of physical ability (Molokáč et al.,2022).

Mountain hiking requires more advanced arrangements from both the organizer and the tourist, as trails are more challenging and may contain slippery or rocky routes. Hence, participants must have a basic knowledge of hiking through mountains (Molokáč et al.,2022). Also, the factor of expertise is essential to guarantee a fully embedded experience in hiking (Mills and Butler, 2005).

In addition, Leister (2019) mentioned that some factors may determine the satisfaction level of participants in hiking tours: the quality of services from lodging to transportation and catering, the effectiveness of the organizers, the uniqueness of the hiking trail, the surrounding scenery, the condition of the environment, the attitude, behavior, and physical

condition of the participant. In addition, the safety of the travelers and the protection of the natural environment are among the factors that contribute to the quality of hiking experiences (Martin et al., 2017). Also, age, gender, and educational level can influence the travel decision to hiking destinations (Tangeland et al., 2013). Hikers are often residents of big cities that are characterized by being loud and crowded most of the time. Thus, they are considered escapers from ordinary life to a more authentic one. (Silverman, 2015)

Regarding the motives of mountain hikers, Goldenberg et al. (2008) and Svarstad (2010) clarified that the possible motives for hiking could be seeking tranquility, being distant from pollution sources, recreation, a sense of belonging, and the desire to escape from society's problems. Also, Moira et al. (2021) investigated the motives of travelers engaging in hiking activities in Greece and revealed that direct contact with nature, exploring hidden gems, and experiencing different cultures are among the main drivers for participating in such tours. While Hill et al. (2009) and Bowler et al. (2010) referred to mental well-being as a motive for enrolling in hiking tours.

In the context of Egypt, there are various unique mountain hiking trails, from the Valley of the Wales or Wadi Al Hitan in Fayoum, the Red Sea Mountains, Mount Hamata in Wadi El Gemal in Marsa Alam, the Canyons, Saint Catherine Mountains, and valleys, to Elba Mountain in the south of the country (Experience Egypt,2025).

The Saint Catherine area in Egypt is one of the most important cultural, natural, and religious spots. In S. Catherine, there are a huge number of mountains that represent religious and cultural values. In addition, this area is rich in biodiversity, as it contains rare species of animals, birds, trees, and plants (UNDP,2020). Therefore, in the last few years, hiking in the Sinai Peninsula has gained huge publicity among tour operators and travelers who want to be engaged in hiking activities.

In 2015, the Sinai Trail was introduced to individuals who want to join hiking tours; it was about 220 km and lasted for 12 days. Later in 2018, the trail was extended to be 550 km with 48 days to finish. This trail is managed and operated by the eight local Bedouin tribes in Sinai. This trail is a part of a tourism initiative that was developed to nourish the economic and social traditions of the local tribe members in Sinai while also preserving their local traditions and customs (Sinai Hikes,2025).

There is also the Red Sea mountain trail, which is a 170 km one through which the participant can enjoy the eastern desert with the Red Sea coastal and the valleys of the surrounding mountains. This trail can last many days. As a result, it can be divided into short hike trips according to the level of difficulty (Experience Egypt,2025). In Jordon, there is a long hiking trail known as the Wadi Rum trail. Accordingly, there was a plan in 2023, in which all three trails: Sinai trail, Red Sea trail in Egypt, and Wadi Rum trail in Jordon, can be combined in one intercontinental trail known as the Bedouin trail (Red Sea Mountain trail, 2025).

Usually, Local Bedouins from the local tribes take the responsibility of guiding hikers through the trails (Experience Egypt,2025). They also tell hikers about the hidden stories about the valleys and mountains of Sinai, while introducing the natural heritage of the valleys to them (Sinai Hikes,2025). Hiking activities can stimulate economic and sociocultural benefits to the local Bedouin tribes in Sinai by providing them with job opportunities to guide them across the trails and provide catering and lodging services to hikers.

## 2.2 Mental Health and Mountain Hiking

Mental health and wellbeing present one of the Sustainable Development Goals that were declared in 2015, and are supposed to be achieved by 2030 (United Nations, 2015). The World Health Organization has declared that “health includes both physical, mental, and social well-being of individuals” (Korkeila, 2000). Moreover, Mental health is not about whether an individual does not suffer from mental disorders or anxiety; on the contrary, it includes the existence of well-being (Keyes, 2002; Lamers, 2012). Hence, Positive mental health can include the following indicators: self-esteem, sense of mastery, sense of coherence, self-efficacy, the ability to cope with life challenges, and diversity (Korkeila, 2000).

The tourism industry has the potential to achieve sustainable development (Buhalis et al., 2023 and Chen et al., 2024) in many spheres especially the mental health of travelers, as the improvement of mental health and well-being of travelers is not guaranteed in tourism, as tourists may witness negative emotions like stress, disgust, fear, anxiety, etc., due to gaps in delivering services (Zhang et al., 2021; Chen et al., 2024).

Mountain hiking as a tourism activity includes physical and mental participation in creating a unique experience, as it aims to develop the spirit, mental, and physical abilities of travelers (Nordbø & Prebensen, 2015; Molokáč et al., 2022). Furthermore, Sturm et al. (2012) revealed that hiking trips can decrease the feelings of emotional distress, despair, and suicidal thoughts. Also, Svarstad (2010) declared that hiking has positive impacts related to the ability to disconnect from the world, purify the mind, and achieve peace and quietness.

The study of Nordbø and Prebensen (2015) investigated the perceptions of participants about the physical and mental benefits gained from hiking activities in Norway, and it found that hikers evaluated the physical benefits of such activities at a higher level, while the evaluation of the mental benefits was at a lower one. Current tourism services do not fully satisfy the mental needs of tourists. Therefore, a recent cooperation between tourism and mental health has been found to meet the international rising interest in mental health care (Chen et al., 2024). The existence of a reliable measurement instrument of positive mental health is crucial to obtain valid results; most of the instruments that were found in questionnaires measure emotional well-being as a part of positive mental health. However, a limited number of questionnaires contain items that measure the psychological and social well-being of individuals (Lamers, 2012).

In this regard, some studies that are specialized in mental health, like the study of Carol Ryff (1989), which established a model to measure psychological well-being that includes dimensions, like Self-acceptance, positive relationships with others, personal growth, and purpose of life (Lamers, 2012). In 1998, Keyes created the social well-being scale that contains five dimensions, while the Warwick–Edinburgh mental well-being scale measures emotional and psychological well-being dimensions (Lamers, 2012). In 2002, Keyes developed The Mental Health Continuum - Long Form (MHC- LF), which is a multidimensional model to measure mental well-being that is often categorized into three main domains: emotional well-being, psychological well-being, and social well-being. Keyes has declared that a person who can experience emotional, psychological, and social well-being is considered mentally healthy. The model was characterized by being too long as it included 40 items (Lamers, 2012).

Consequently, the study of Keyes et al. (2008) has created the MHC-SF (Short Form), which was developed to provide a brief and more focused questionnaire to measure mental health dimensions. This scale includes 14 items that were tested for validity and also

reliability (Keyes et al., 2008, in Lamers, 2012). The dimension of emotional well-being is assessed by items related to “the degree of happiness, interest in life, and satisfaction”, while the social well-being dimension assesses “social contribution, integration, actualization, acceptance, and coherence”. Regarding the psychological dimension, it can assess “self-acceptance, environmental mastery, positive relationships with others, personal growth, and autonomy” (Keyes et al., 2008; Lamers, 2012; Yeo & Suárez, 2022).

Based on the prior literature, the paper proposes the following conceptual model that illustrates the expected relationships between variables. The model clarifies that there is a direct relationship between the independent variable of the study, “Frequent participation of travelers in hiking trips,” and the dependent variable, which is the “mental health of the travelers” that can be categorized into emotional, social, and psychological domains. Additionally, three moderator variables can affect the direction or strength of the main relationship of the study; those moderators are: The difficulty level of hiking trails, duration of the trip, and the quality of the hiking experience. Based on this, three more hypotheses were generated to present the role of the moderators. As for the demographic factors of the study: age, gender, and nationality, they are considered as control variables. While they are not the primary focus of the study, their influence on the mental health of the travelers will be accounted for during the data analysis. The following model represents the previous relationships.

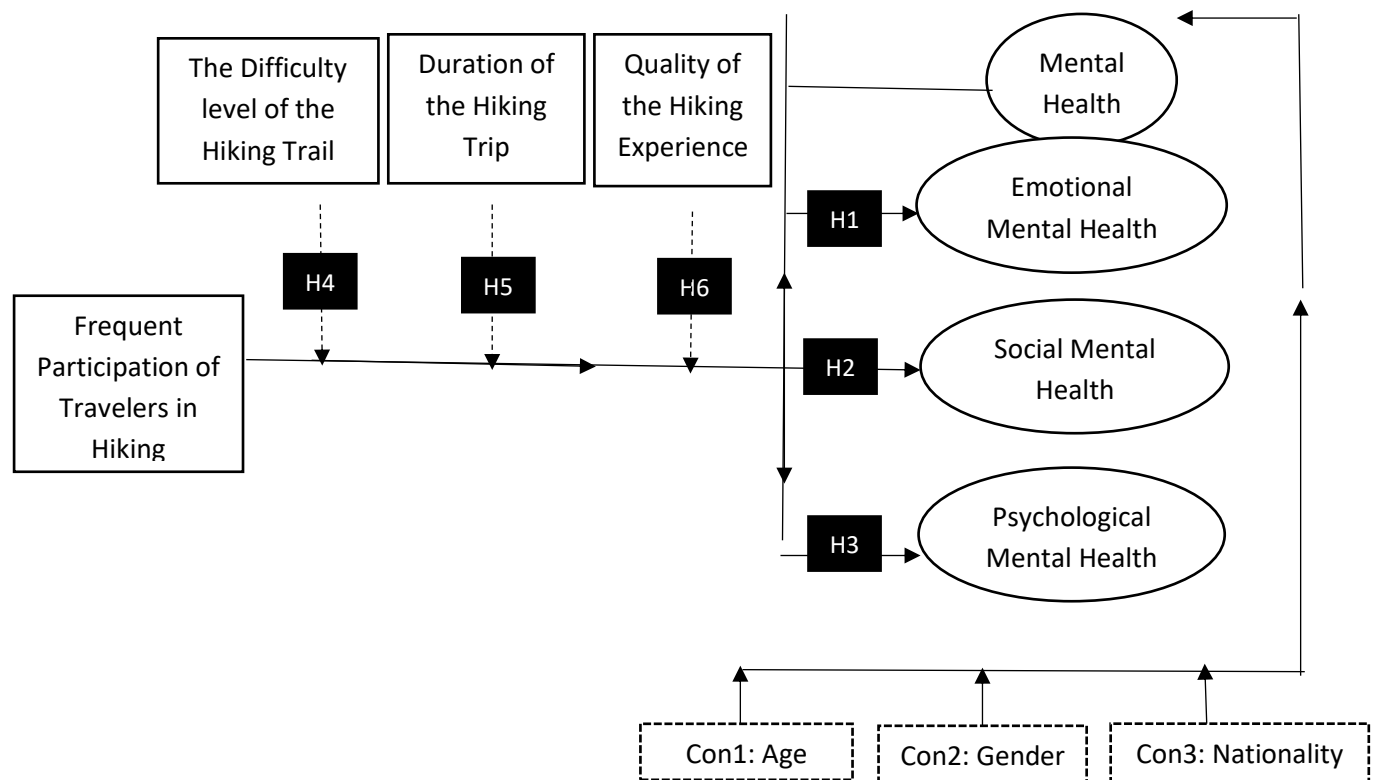


Figure (2) The Conceptual Model



**Based on the prior literature and the conceptual model, the study formulated the following research hypotheses:**

- H1:** There is a significant correlation between the frequency of participation in hiking activities and the emotional well-being of travelers.
- H2:** There is a significant correlation between the frequency of participation in hiking activities and the social well-being of travelers.
- H3:** There is a significant correlation between the frequency of participation of travelers in hiking activities and the psychological well-being of travelers.
- H4:** The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the difficulty level of the hiking trail.
- H5:** The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the duration of the hiking trip.
- H6:** The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the quality of the hiking trip.

### **3. Methodology**

The study employs a descriptive analytical methodology to explore the impact of mountain hiking trips on the mental health of travelers through examining three main domains of mental well-being: emotional, social, and psychological. A qualitative approach was adopted to investigate the correlations between variables.

#### **3.1 Sampling**

The sample consists of 327 participants from the population that includes the hiking communities in Egypt and foreign hikers who usually hike in Egypt's mountains. These hikers were identified and reached with the help of tour operators who specialize in organizing hiking tours. The study employs a purposive sampling method by selecting hikers who have recently engaged with mountain hiking activities organized by online tour operators. The responses were gathered online through social media platforms from the period from 1 April to 20 June 2025.

#### **3.2 Data Collection Method and Analysis**

To test the conceptual model and research hypotheses, a questionnaire was formulated to obtain data from travelers who have recently participated in mountain hiking trips. The questionnaire consists of three main sections: first, the demographic characteristics of participants (age, gender, and nationality). Second, the engagement in hiking activities that includes four items related to the frequency in participating in such trips, the duration of the trips, the level of difficulty of hiking trails that the participant usually joins adopted from Molokac (2022), and the quality level of the hiking experience based on the organizational effectiveness and safety factors. Third, the mental health section, which is formulated based on the Mental Health Continuum -short form (MHC-SF) of Keyes et al. (2008) to evaluate the travelers' reactions and responses after the hiking trip.

The MHC-SF model of Keyes was previously tested for being reliable and validated; however, testing the adopted model in the present, which is applied for testing travelers' mental health conditions, is considered a crucial element to ensure consistency within the selected sample. Thus, SPSS 25 was used to conduct the reliability test and other statistical

tests on the variables. According to Cronbach's Alpha calculations, the questionnaire has a reliability of 0.832, indicating a good level of consistency within the questions.

#### 4. Results

In the following, the study presents the results based on the statistical tests conducted through SPSS 25 to explore the relations between variables and test the research hypotheses.

##### 4.1 Sample characteristics

This section illustrates the demographic characteristics of the respondents; the majority of the sample were females with 53.2%. As for age, participants from 31-50 years old represent the largest age group with about 65.4%. While Participants under 18 and above 70 are considered a minority in the study. Regarding nationality, most of the sample are Egyptians with 85.6%. Besides, there are about 14% from other nationalities who participate in hiking tours in Egypt. These nationalities are from Germany, France, the USA, South Africa, and Saudi Arabia.

**Table (1) Demographic characteristics of the Sample**

		Frequency	%
<b>Gender</b>	Male	153	46.8
	Female	174	53.2
<b>Age</b>	Under 18	3	.9
	18 – 30	95	29.1
	31 – 50	214	65.4
	51 – 70	12	3.7
	Above 70	3	.9
<b>Nationality</b>	Egyptian	280	85.6
	Non-Egyptian	47	14.4
<b>N.</b>		327	

As for the characteristics of the sample according to the dimension of engagement in hiking trips, the results indicate that approximately 50% of the sample prefers to join hiking trips once or twice a year, while 31% engage in such trips every few months, from 3 to 4 times a year. A small percentage of respondents 11% participate in hiking activities once or twice a month. The minority of the sample, 2.8% join these trips weekly. While 4.6% of responses clarified that they rarely participate in hiking tours. As for the difficulty level of the hiking trails that participants usually join, nearly 49 % prefer to hike within an intermediate level of difficulty, and 30% of the sample participate in the beginner levels of hiking trips. Only 21 % go for the advanced level. Moreover, the majority of the sample, 50.5% prefer hiking trips that range between 2-3 days, also 30% prefer to join hiking activities that last only for a few hours. Only 7.3 % join trips that last more than 3 days. Regarding the quality of the hiking experience, almost 45.5% find that their hiking experience in the matter of quality, organizational effectiveness, and safety is considered good, also 33.9% indicate that the quality of their hiking experience is considered excellent. While 3.7% find it very poor.



**Table (2) Engagement in Hiking Trips**

		Frequency	%
<b>Frequency of Participation in Hiking Trips</b>	Rarely	15	4.6
	Once or twice a year	165	50.5
	Every few months	102	31.2
	Once or twice a month	36	11.0
	Weekly	9	2.8
<b>Difficulty Level of Hiking Trails</b>	Beginner level	99	30.3
	Intermediate level	159	48.6
	Advanced level	69	21.1
<b>Duration of The Hiking trip</b>	A Few hours	99	30.3
	1 day	39	11.9
	2-3 days	165	50.5
	More than 3 days	24	7.3
<b>Quality of The Hiking Experience</b>	Very poor	12	3.7
	Poor	3	.9
	Fair	55	16.8
	Good	146	44.6
	Excellent	111	33.9
N.	327		

#### 4.2 Descriptive Statistics of Mental Health Dimension

In the following, the study conducted a descriptive statistics analysis of the mental health dimension by calculating the mean for each dimension of mental health: emotional, social, and psychological well-being. The mean of the emotional and psychological well-being dimension is 3.44 and 3.43, which indicates a high level of stability among travelers who join hikes in both dimensions, while the social well-being's mean of 2.94 refers to the lack of social impact in hiking trips. There is a moderate standard deviation among responses of the emotional well-being with a rate of 1.13, while the social well-being dimension recorded a higher std. deviation with 1.19, which indicates a variation in the responses among participants due to the differences that may occur during hiking experiences. However, the psychological well-being dimension is considered the lowest standard deviation with 1.12, which refers to a good coherence between responses regarding the psychological impacts of hiking.

**Table (3) Descriptive Statistics of Mental Health Dimensions**

	N	Mean	Std. Deviation
<b>Emotional Well-being</b>	327	3.4434	1.13870
<b>Social Well-being</b>	327	2.9450	1.19443
<b>Psychological Well-being</b>	327	3.4312	1.12037

### 4.3 Hypotheses Testing

In the following section, the study will test the research hypotheses using statistical tests with the SPSS 25 software.

#### 4.3.1 The Correlation Between Participating in Hiking Activities and Emotional Well-being

Since both variables in hypothesis 1 are ordinal, the Spearman correlation coefficient was regarded as the most appropriate test to examine the relationship between the frequency of participation in hiking activities and travelers' emotional well-being. According to the test results, the correlation coefficient is 0.163, which indicates a weak positive association between the two variables; the emotional well-being tends to be slightly higher among travelers who frequently participate in hiking trips. The p-value is .003, indicating a statistically significant correlation between the frequency of participation in hiking and the emotional well-being of travelers. As a result of this, H1: "There is a significant correlation between the frequency of participation in hiking activities and the emotional well-being of travelers" is statistically supported.

**Table (4) Participating in Hiking Activities and Emotional Well-being**

Correlations				
			Frequency of Participation in Hiking	Emotional Well-being
Spearman's rho	Frequency of Participation in Hiking	Correlation Coefficient	1.000	.163**
		Sig. (2-tailed)	.	.003
		N	327	327
	Emotional Well-being	Correlation Coefficient	.163**	1.000
		Sig. (2-tailed)	.003	.
		N	327	327
		**. Correlation is significant at the 0.01 level (2-tailed).		

#### 4.3.2 The Correlation Between Participating in Hiking Activities and Social Well-being

The Spearman correlation coefficient between the frequency of participating in hiking trips and social well-being is .110, indicating a very weak positive association between the variables. However, the p-value of .047 demonstrates a significant correlation between hiking and slightly higher social well-being. Thus, despite the weak correlation, H 2: "There is a significant correlation between the frequency of participation in hiking activities and the social well-being of travelers" is statistically supported.

**Table (5) Participating in Hiking Activities and Social Well-being**

Correlations				
			Frequency of Participation in Hiking	Social Well-being
Spearman's rho	Frequency of Participation in Hiking	Correlation Coefficient	1.000	.110*
		Sig. (2-tailed)	.	.047
		N	327	327
	Social Well- being	Correlation Coefficient	.110*	1.000
		Sig. (2-tailed)	.047	.
		N	327	327

\*. Correlation is significant at the 0.05 level (2-tailed).

#### 4.3.3 The Correlation Between Participating in Hiking Activities and Psychological Well-being

Regarding the correlation between the frequency of participating in hiking trips and psychological well-being, Spearman's rho is .160, which demonstrates a weak positive correlation between the variables. Despite the weak association, the p-value of .004 suggests a significant correlation between the frequency of participating in hiking and psychological well-being, and is unlikely to happen by chance. Therefore, H3: "There is a significant correlation between the frequency of participation of travelers in hiking activities and the psychological well-being of travelers" is statistically supported.

**Table (6) Participating in Hiking Activities and Psychological Well-being**

Correlations				
			Frequency of Participation in Hiking	Psychological Well-being
Spearman's rho	Frequency of Participation in Hiking	Correlation Coefficient	1.000	.160**
		Sig. (2-tailed)	.	.004
		N	327	327
	Psychological Well-being	Correlation Coefficient	.160**	1.000
		Sig. (2-tailed)	.004	.
		N	327	327
**. Correlation is significant at the 0.01 level (2-tailed).				

#### 4.3.4 Examining The Role of Moderator Variables

According to the previous conceptual model, three moderators may affect the relation between the frequency of participation in hiking trips and travelers' mental health: the difficulty level of hiking trails, the duration of the hiking trip, and the quality of the hiking experience, including organizational effectiveness and safety factors. The moderating

variables were examined through a linear regression analysis incorporating interaction terms.

Firstly, the p-value associated with the difficulty level of hiking trails is .664, indicating a non-significant effect on mental health. However, the Unstandardized Coefficient B is .040, which refers to a limited impact of the change in the difficulty level of hiking trails on travelers' mental health. Also, the interaction between the level of difficulty and the participation demonstrates a negative association with  $B = -.090$ , as the higher the difficulty level of hiking, the less the participation in hiking activities and the mental health of travelers. The p-value of the interaction term is .120, which suggests that there is no significant effect of the difficulty level on the relationship between participating in hiking and mental health. Based on this, H4: "The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the difficulty level of the hiking trail" is not statistically supported.

**Table (7) The Difficulty Level of Hiking Trails as a Moderator**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.689	.193		13.957	.000
	Frequency of Participating in Hiking	.212	.081	.179	2.611	.009
	Difficulty Level of Hiking Trails	.040	.091	.028	.435	.664
	Interaction	-.090	.058	-.093	-1.558	.120

a. Dependent Variable: Mental Health

Secondly, the linear regression analysis clarified that the unstandardized coefficient or B of the moderator variable of the duration of the hiking trips is -.004 which suggests a weak negative impact of the duration on the mental health while the p-value is .940, suggesting a non-statistically significance effect of the moderator variable on the mental health of travelers'. The interaction term indicates that there is also a negative association, as the higher the duration of the trips, the less likely the improvement of the mental well-being with  $B = -.090$ . Also, the p-value .123 refers to a non-significant effect of the interaction between duration and participation variables on the mental well-being. According to this, H5: "The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the duration of the hiking trip" is considered not statistically supported.

**Table (8) The Duration of Hiking Trips as a Moderator**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.818	.205		13.751	.000
	Frequency of Participating in Hiking	.181	.066	.153	2.746	.006
	Duration of Hiking Trips	-.004	.056	-.004	-.075	.940
	Interaction	-.090	.058	-.085	-1.547	.123

a. Dependent Variable: Mental Health

Thirdly, the quality of the hiking experience, including the factors of organizational effectiveness and safety, is statistically significant at the level of .000. Moreover, the  $B = .407$ , indicating a positive association between the quality of the hiking experience and the improved mental health of travelers. As for the interaction between the frequency of participation and the quality of the hiking experience, the  $B = .245$ , which suggests that the higher the quality of the hiking experience reinforces the relationship between the frequency of participation in hiking and the improved mental well-being of travelers. Besides, the p-value is .000, which is considered a high indicator that H6: “The relationship between the frequency of participation in hiking trips and travelers’ mental health is moderated by the quality of the hiking experience” is statistically supported.

**Table (9) The Quality of the Hiking Experience as a Moderator**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.209	.271		4.454	.000
	Frequency of Participating in Hiking	.155	.061	.130	2.551	.011
	Quality of the hiking experience (Organizing and Safety)	.407	.056	.376	7.221	.000
	Interaction	.245	.058	.218	4.202	.000

a. Dependent Variable: Mental Health

#### 4.3.5 Analyzing the impact of control variables

The conceptual model included demographic factors as control variables to ensure the accuracy and validity of the results. The linear regression analysis revealed that only gender can affect the mental health of travelers; females’ mental health tends to be more affected by hiking trips, with a p-value of .003 and an unstandardized coefficient of .326. However, Age and nationality did not show any statistical influence on mental health.

**Table (10) Examining The Control Variables**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.241	.423		5.296	.000
	Frequency of Participating in Hiking	.206	.065	.174	3.166	.002
	Gender	.326	.110	.162	2.954	.003
	Age	-.055	.095	-.032	-.579	.563
	Nationality	.124	.156	.043	.797	.426

a. Dependent Variable: Mental Health

Based on the previous findings, the following table presents a summary of the research hypotheses testing results.

**Table (11) A Summary of the Research Hypotheses Testing Results**

The Hypothesis	The test	Correlation Coefficient	Unstandardized Coefficients (B)	p-value	The result
<b>H1:</b> There is a significant correlation between the frequency of participation in hiking activities and the emotional well-being of travelers.	The Spearman correlation coefficient	.163	-	.003	<b>Supported</b>
<b>H2:</b> There is a significant correlation between the frequency of participation in hiking activities and the social well-being of travelers.	The Spearman correlation coefficient	.110	-	.047	<b>Supported</b>
<b>H3:</b> There is a significant correlation between the frequency of participation of travelers in hiking activities and the psychological well-being of travelers.	The Spearman correlation coefficient	.160	-	.004	<b>Supported</b>
<b>H4:</b> The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the difficulty level of the hiking trail.	<b>Linear Regression Analysis</b>	-	-.090	.120	<b>Not supported</b>
<b>H5:</b> The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the duration of the hiking trip.	<b>Linear Regression Analysis</b>	-	-.090	.123	<b>Not supported</b>
<b>H6:</b> The relationship between the frequency of participation in hiking trips and travelers' mental health is moderated by the quality of the hiking experience.	<b>Linear Regression Analysis</b>	-	.245	.000	<b>Not supported</b>



The following discussion section provides an interpretation of the previously reported findings.

## 5. Discussion

The study aimed to investigate the influence of mountain hiking trips in Egypt on the mental health of travelers. While limited prior literature has directly examined this relationship through a clear model, the present study explored the relationship between hiking and mental health using a validated multidimensional model that consists of three main dimensions of mental health: emotional, social, and psychological well-being.

The findings revealed that frequent participation in hiking tours can positively affect the emotional, social, and psychological well-being of travelers. Although the correlations were positive, they were considered weak, especially in the case of the social well-being dimension. However, the analysis illustrated a significant correlation between participation in hiking trips and mental health, which provides statistical support for hypotheses H1, H2, and H3.

These results align with the findings of Svarstad (2010) and Sturm et al. (2012), who found that hiking can have a positive impact on physical, emotional, and psychological well-being. It is crucial to note that the results of the study of Nordbø and Prebensen (2015) found that the evaluation of participants in hiking in Norway was at a lower level regarding the mental benefits gained from hiking.

Nevertheless, the weak correlations in the current study, especially in the social dimension, may have occurred due to the differences in social norms and communication patterns among the Egyptian hikers who form the majority of the sample. This interpretation is consistent with the study of Korkeila (2000), who discussed that social and cultural factors could affect the correlation between hiking and mental health.

Moreover, the social backgrounds of respondents may have influenced their reactions to questions related to emotional, social, and psychological issues. The lack of communication skills during social gatherings on the trips may result in a feeling of isolation from the hiking group.

On the other hand, the moderator variables of the difficulty level of hiking trails and the duration of hiking trips were found to have no significant influence on the relationship between participation in hiking and mental health. Hence, H4 and H5 were not supported by the results. However, the moderator of the quality of the hiking experience, or H6, was statistically supported, as it appeared to have a significant impact and correlation with the relationship between variables.

Unlike the present results, previous studies by Molokáč et al. (2022) and Leister (2019) have discussed that the level and the uniqueness of the hiking trail, as well as the duration of the trips, could have a crucial influence on the mental health of hikers. In contrast, the findings of Martin et al. (2017) and Leister (2019) are consistent with the current result regarding the third moderator “the quality of the hiking experience”, as they declared that the efficiency of the tour operator who organizes the hiking trips, the guides, and ensuring safety standards has a pivotal impact on improving the quality of the trip and consequently enhancing the mental well-being of hikers.

These results could be explained based on the fact that the majority of the sample frequently joins hiking trips lasting from a few hours up to 3 days; this is likely due to work-related constraints, as long hiking trips typically require official leave, which may not be

available for everyone. Additionally, most of the participants usually join intermediate-level hikes, which may be attributed to their fitness levels and hiking experience. Furthermore, gender was found to be the only control variable that could affect mental health, as females' mental well-being appeared to be more influenced than men's by mountain hiking trips. This could be due to the emotional sensitivity of women in general and their desire to relieve pressure generated from work and home responsibilities by engaging in nature-based activities such as mountain hiking.

The study was limited to exploring the impact of frequent participation in mountain hiking trips on mental health; the focus on mountain hiking was due to its wide popularity among the hiking communities in Egypt and the potential influence of mountains as a nature-based environment on reinforcing psychological benefits. Additionally, the influence of moderator variables was tested to gain a comprehensive understanding of the research scope based on a sample of Egyptian and foreign hikers in Egypt. Nevertheless, the majority of the sample were Egyptians due to the difficulties of reaching foreign individuals who recently participated in mountain hiking in Egypt.

Future research can investigate a more diverse sample of participants from different cultural and social backgrounds. It may also focus on foreign travelers who engage in more challenging physical and adventurous activities, exploring how such experiences could impact their well-being before and after participation. Furthermore, future studies could examine the role of tour operators who manage these hiking trips in delivering a more effective service that could improve mental health outcomes. This could help fill the knowledge gap that the present study was unable to address.

## **6. Conclusion and Recommendations**

The current study investigated the influence of participating in mountain hiking trips on the mental health of travelers. The findings revealed that frequent participation in hiking tours can have a weak but positive impact on the emotional, social, and psychological well-being of participants. Moreover, the difficulty level of hiking trails and the duration of hiking trips did not significantly influence the mental health of hikers. In contrast, the quality of the hiking experience, particularly in terms of organizational effectiveness and safety, was found to have a significant moderating effect on the relationship between participation in hiking trips and travelers' mental health.

Accordingly, the study contributes to a deeper understanding of the potential of mountain hiking tours to enhance participants' mental health within the Egyptian context. Based on the previous findings, recommendations can be proposed for stakeholders involved in hiking tours and the mental health sector. These recommendations aim to enhance the impact of hiking experiences on travelers' mental well-being.

**First**, destination marketers are encouraged to position hiking tours as a valuable means of enhancing mental and spiritual well-being, particularly in Egypt. Promotional campaigns should specifically highlight areas such as the Saint Catherine Mountains and valleys, the Red Sea Mountains, and the promising hiking trails, like the Sinai trail, Red Sea trail, and the upcoming intercontinental Bedouin trail, that can have the potential to attract global attention from the mountain and adventure tourism market. In addition, investment in wellness-oriented tourism infrastructure, such as wellness camps, resorts, and retreats, can provide therapy services for both domestic and international tourists. This sort of travel therapy can promote travelers' psychological health and well-being through engaging experiences.

**Second**, tour operators, especially those who are specialized in organizing hiking trips, should prioritize strict safety standards, as safety remains a crucial factor in such activities based on the present study findings. Organizers and guides must be well-trained and certified to effectively address the needs of participants. Additionally, providing comprehensive first aid training for organizers can greatly enhance the overall hiking experience. It is also essential that operators supply participants with appropriate safety gear throughout the hike. Moreover, a clear safety protocol should be developed by operators to minimize risks and address potential challenges that participants could face, especially during advanced hiking trails.

Furthermore, since social wellbeing was found to be the least correlated dimension based on the statistical analysis, organizers are encouraged to incorporate structured social and interactive activities within the hiking tour program, which could strengthen social connections among participants during the trip. Considering the social and psychological differences between individuals involved in the hiking tour, trained organizers could play a key role in fostering social cohesion that will result in creating a sense of belonging among participants. Activities such as interactive exercises, group discussions, and team-building initiatives may enhance social well-being after the trip.

**Third**, mental health practitioners and wellness coaches are encouraged to integrate hiking tours as a method in their therapy programs. This could be implemented by providing sessions throughout the hiking trails. For instance, this may include physical and spiritual activities, such as yoga or group therapy sessions.

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## استكشاف تأثير رحلات التنزه الجبلي في مصر على الصحة النفسية للسائحين

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### المستخلص باللغة العربية

أدى الاهتمام العالمي المتزايد بالصحة النفسية إلى إدراجها كنقطة بحثية جوهرية في الأبحاث الأكاديمية الحديثة وبالأخص في المجال السياحي. وفي هذا السياق، برزت رياضة التنزه كنشاط ذو أهمية بارزة من السياحة القائمة على الطبيعة، حيث تمتلك القدرة على منح منافع عقلية ونفسية وروحية للسائحين. وبناءً على ذلك، تستكشف الدراسة إمكانات رحلات التنزه أو المشي الجبلي في مصر في تحسين الأبعاد الرئيسية الثلاثة للصحة النفسية: الرفاهية العاطفية، والاجتماعية، والنفسية. وتبنت الدراسة المنهج الكمي من خلال إجراء اختبارات إحصائية، ألا وهي معامل ارتباط سبيرمان وتحليل الانحدار الخطي، وذلك على عينة مكونة من 327 فردًا من المصريين والأجانب ممن يشاركون بفاعلية في رحلات التنزه الجبلي في مصر. بالإضافة إلى ذلك، تم استخدام أداة الاستبيان كأداة رئيسية لجمع بيانات الدراسة، حيث تم الاعتماد في بناء الأداة على نموذج Keyes (2008) للصحة النفسية، كما تم تعديل النموذج ليتناسب مع طبيعة الدراسة الراهنة لأجل تقييم الصحة النفسية للمشاركين عقب قيامهم برحلات التنزه الجبلي.

بيّنت نتائج الدراسة وجود علاقة إيجابية بدرجة ضعيفة بين متغير تكرار المشاركة في رحلات التنزه الجبلي وبين تحسن الصحة النفسية. كما أوضحت النتائج أن متغير جودة تجربة التنزه الجبلي وبالأخص فيما يتعلق بمعايير السلامة والتنظيم الفعال للرحلات، يعد من العوامل المعدلة لقوة واتجاه العلاقة بين المشاركة في مثل تلك الرحلات وبين درجات التحسن في الصحة النفسية. وبناءً على نتائج الدراسة، قدمت الدراسة توصيات عملية إلى عدة جهات منها: الهيئات السياحية الرسمية، ومنظمي رحلات التنزه الجبلي، والممارسين والعاملين بمجال الصحة النفسية؛ حيث تهدف تلك التوصيات إلى تعزيز دور رحلات التنزه الجبلي في مصر في دعم الصحة النفسية للسائحين.

**الكلمات الدالة:** رحلات التنزه الجبلي، الصحة النفسية، الرفاهية العاطفية، الرفاهية الاجتماعية، الرفاهية النفسية.