

The Effect of River Rafting Experiences on Tourists' Stress Levels in Pangalengan, Bandung Regency

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ABSTRACT

The development of adventure tourism encourages an increase in tourist interest in activities that not only provide entertainment, but also have an impact on psychological conditions. One of these activities is rafting in Pangalengan which has increased visits every year. This research aims to analyze the influence of the experience of rafting tourism activities on the stress level of tourists. The method used is a quantitative approach with a causal associative design. The research sample of 366 respondents was determined using the purposive sampling technique. Data was collected through questionnaires and analyzed using simple linear regression. The results of the study showed that the experience of rafting tourism had a significant effect on the stress level of tourists, as evidenced by a significance value of $0.000 < 0.05$ and a determination coefficient value of 0.529. This shows that travel experiences contribute 52.9% to the variation in tourist stress levels. Thus, the better the experience that tourists feel, the stress level tends to decrease. This study confirms that adventure-based tourism activities can be an effective alternative in reducing stress and improving the psychological well-being of tourists.

INTRODUCTION

The development of global tourism in recent decades shows a significant shift from purely recreational activities to an essential means of maintaining balance in modern life. The World Tourism Organization states that tourism travel now functions not only as entertainment but also as a means of physical and mental recovery amid increasingly complex life pressures (UNWTO, 2025). In line with this, there is a growing trend of experience-based tourism that places the travel experience at the core of the journey, rather than merely the destination visited (Zhou & Wang, 2024). In this context, tourists are increasingly seeking activities that provide deep emotional experiences, personal satisfaction, and psychological benefits such as stress reduction and improved mental well-being (Bagheri, Guerreiro, Pinto, & Ghaderi, 2024; Câmara, Pocinho, Agapito, & Jesus, 2022; Liu, Zhou, & Sun, 2023). One form of tourism that is rapidly growing in response to this need is adventure tourism, which offers a combination of physical challenges, interaction with nature, and unique experiences not found in daily routines (Mardian et al., 2025).

The emergence of experiential tourism is closely linked to the increasing pressures faced by modern society (Dridea & Dobrotă, 2024). Factors such as high job demands, dense daily schedules, social pressures, and exposure to complex urban environments are major triggers of stress in individuals (Organization, 2022). In addition, rapid technological development has exacerbated this condition by fostering lifestyles that tend to be sedentary and lack interaction

with the natural environment (Buckley, 2023; Chen, Petrick, & Shahvali, 2016; Knobloch, Robertson, & Aitken, 2017). This situation leads to mental fatigue, decreased quality of life, and disruptions in psychological well-being. In the context of tourism, these conditions encourage individuals to seek activities that are not only enjoyable but also restorative to their mental state, particularly in reducing experienced stress levels.

The impact of these factors is not limited to psychological aspects but also extends to productivity, health, and overall quality of life. Poorly managed stress can trigger various health problems, including anxiety, depression, and chronic physical disorders (Zaheer & Asad Khan, 2022). In tourism contexts, elevated stress levels encourage individuals to seek recovery alternatives through recreational activities, particularly those involving direct interaction with nature. Research indicates that nature-based tourism activities can positively affect psychological conditions by reducing anxiety levels, improving mood, and promoting mental relaxation (Avecillas-Torres et al., 2025). Therefore, nature-based and adventure tourism are increasingly viewed as effective strategies for addressing psychological pressures experienced by modern society.

One form of adventure tourism with strong potential for providing psychological benefits is white-water rafting. This activity not only offers excitement and physical challenges but also involves teamwork, social interaction, and intense emotional experiences during participation (Hendrayana et al., 2022). From a sport tourism perspective, rafting falls into the category of active sport tourism, which requires direct physical participation from tourists (Pomfret et al., 2025). The experiences gained from this activity are multidimensional, encompassing pleasure (hedonism), deep involvement (flow), escape from routine (escapism), learning, challenge, social interaction (socializing), and togetherness (Song et al., 2025; Xu et al., 2026). The combination of these dimensions makes the tourist experience a critical factor that may influence tourists' psychological conditions, particularly in reducing stress levels.

Although numerous studies have examined the psychological benefits of adventure tourism, most have focused on tourist satisfaction, motivation to visit, and destination loyalty (Chetrin Ginting et al., 2025; Yuliviona et al., 2025). Other studies have addressed psychological well-being or general recovery without specifically measuring stress levels as a standardized dependent variable (Li et al., 2024; Song et al., 2025). Furthermore, research specifically examining the influence of rafting experiences on tourists' stress levels remains limited, especially in local Indonesian destinations such as Pangalengan, Bandung Regency. Therefore, this study offers novelty by integrating the tourist experience as an independent variable and stress level as a dependent variable measured using a standardized psychological instrument, namely the Perceived Stress Scale (PSS-10). This approach is expected to provide a more specific empirical contribution to the fields of sport tourism and tourism psychology.

The urgency of this research is further reinforced by the growth of rafting tourism in Pangalengan, which shows a significant annual increase in tourist visits. Data indicate a consistent rise in visitor numbers, reflecting strong interest in this activity. However, this increase has not been matched by a comprehensive understanding of the psychological impacts experienced by tourists after participating in rafting activities. This gap highlights a disconnect between tourism industry growth and scientific understanding of its psychological benefits. Therefore, this study is important to provide empirical evidence on the influence of travel

experiences on tourists' stress levels, thereby supporting tourism development that emphasizes not only economic outcomes but also psychological well-being.

Based on this background, the purpose of this study is to analyze and test the influence of rafting tourism experiences on tourists' stress levels in Pangalengan, Bandung Regency. This study aims to determine the extent to which travel experiences contribute to tourists' psychological conditions and to identify the relationship between perceived experience quality and stress levels following participation in rafting activities. Using a quantitative approach and simple linear regression analysis, this study is expected to provide an empirical understanding of the relationship between these two variables.

The benefits of this research are divided into theoretical and practical contributions. Theoretically, it is expected to enrich tourism studies, particularly in understanding the relationship between tourism experiences and tourists' psychological well-being. It also has the potential to serve as a reference for future research exploring the integration of tourism, psychology, and public health. Practically, the findings are expected to guide rafting tourism operators in designing experiences that are not only engaging but also psychologically beneficial. Additionally, this research may inform local governments in developing sustainable tourism policies that prioritize visitor well-being.

METHOD

This research was designed as a quantitative study with a causal associative approach that focused on the relationship between the experience of rafting tourism activities as an independent variable and tourists' stress levels as the dependent variable. The research strategy was intended to generate an empirical understanding of how travel experiences could contribute to reducing individual psychological distress through nature-based activities. The study was conducted in the Pangalengan rafting tourism area, Bandung Regency, which is known as one of the river-based adventure tourism destinations with a steadily increasing number of visits each year. The study was conducted in 2025, taking into account the active tourism operational period and the availability of respondents relevant to the research focus. This research covered several main aspects, namely multidimensional tourism experiences (emotional, physical, social, and cognitive) and tourists' psychological conditions, as measured through perceived stress after participating in rafting activities. Thus, the study design was directed toward systematically describing the cause-and-effect relationship between the quality of the tourist experience and changes in tourists' psychological conditions within the context of adventure tourism.

The population in this study consisted of all tourists who participated in rafting activities in Pangalengan in 2025, totaling 4,285 individuals based on tourist visit data. Given the limitations in reaching the entire population, this study used a sample determined through a purposive sampling approach, in which respondents were selected based on specific criteria aligned with the research objectives. These criteria included tourists who had directly participated in rafting activities, were at least 17 years old, and were willing to provide information by completing a questionnaire. The sample size consisted of 366 respondents, determined to proportionally represent the population. Data collection was carried out through the distribution of structured questionnaires designed to capture respondents' perceptions of their travel experiences as well as the stress conditions experienced after the activity. In

addition, data collection was supported by field observations to ensure consistency between the empirical conditions at the research site and the data obtained from respondents, thereby enhancing the validity of the findings in describing the phenomenon under study.

The research instrument was structured as a closed-ended questionnaire using a five-point Likert scale, allowing for quantitative and systematic measurement of respondents' perceptions. The tourism experience variable was measured through several key dimensions, namely pleasure (hedonism), deep involvement (flow), escape from routine (escapism), learning, challenge, social interaction (socializing), and togetherness (sense of community), all of which collectively represented the quality of the tourist experience. Meanwhile, the stress level variable was measured using the Perceived Stress Scale (PSS-10), which focuses on individuals' perceptions of experienced psychological stress, including aspects of helplessness and coping ability. The collected data were then systematically analyzed to identify patterns in the relationships between the study variables, with an emphasis on the extent to which travel experiences explained variations in tourists' stress levels. The analysis was conducted using an inferential statistical approach, allowing for the formulation of objective and measurable conclusions regarding the magnitude of the observed effects. Through this strategy, the research was expected to provide data-driven insights into the role of adventure tourism as a means of psychological recovery and to serve as a foundation for the development of tourism products oriented toward tourists' well-being.

RESULT AND DISCUSSION

Instrument testing is a stage that is carried out to ensure that the research measuring tool used is able to measure variables accurately and consistently. This test includes a validity test and a reliability test of the statement items in the questionnaire. The test was carried out using the help of the SPSS application to obtain objective results. Thus, the instruments used can be trusted in the process of collecting research data.

Validity testing is a test that aims to find out the extent to which an instrument is able to measure what it should be measured. A statement item is said to be valid if the value of r is greater than r of the table (r is calculated $> r$ of the table) and the significance value is less than 0.05. In this study, the r -value of the table used was 0.102 with a total of 366 respondents.

Table 1. Results of the Validity Test of Research Instruments

No	Variabel	Item	r count	R table	Remarks
1	Travel Experience	X1	0,799	0,102	Valid
2		X2	0,823	0,102	Valid
3		X3	0,797	0,102	Valid
4		X4	0,809	0,102	Valid
5		X5	0,806	0,102	Valid
6		X6	0,800	0,102	Valid
7		X7	0,808	0,102	Valid
8		X8	0,811	0,102	Valid
9		X9	0,822	0,102	Valid
10		X10	0,820	0,102	Valid
11		X11	0,814	0,102	Valid
12		X12	0,840	0,102	Valid
13		X13	0,796	0,102	Valid

14		X14	0,822	0,102	Valid
15		X15	0,815	0,102	Valid
16		X16	0,831	0,102	Valid
17		X17	0,791	0,102	Valid
18		X18	0,816	0,102	Valid
19		X19	0,828	0,102	Valid
20		X20	0,822	0,102	Valid
21		X21	0,789	0,102	Valid
22	Stress Level	Y1	0,785	0,102	Valid
23		Y2	0,813	0,102	Valid
24		Y3	0,810	0,102	Valid
25		Y4	0,797	0,102	Valid
26		Y5	0,828	0,102	Valid
27		Y6	0,827	0,102	Valid
28		Y7	0,814	0,102	Valid
29		Y8	0,814	0,102	Valid
30		Y9	0,809	0,102	Valid
31		Y10	0,810	0,102	Valid

Source: Primary data processed, 2026

Based on Table 1, all items in the variables of travel experience (X) and stress level (Y) have a calculated r value greater than the r of the table (0.102). This shows that all statement items in the research instrument are declared valid and suitable for use. Thus, the research instrument is able to measure the variables being studied appropriately and in accordance with the research objectives.

The reliability test aims to determine the level of consistency of an instrument in measuring research variables. The instrument is said to be reliable if Cronbach's Alpha value is greater than 0.70. The higher the Cronbach's Alpha value, the higher the instrument's reliability rate.

Table 2. Results of the Reliability Test of Research Instruments

No	Variable	Cronbach's Alpha	Side	Remarks
1	Travel Experience	0,974	0,70	Reliable
2	Stress Level	0,942	0,70	Reliable

Source: Primary data processed, 2026

Based on the test results, the travel experience variable obtained a Cronbach's Alpha value of 0.974 with a total of 21 items, while the stress level variable obtained a Cronbach's Alpha value of 0.942 with a total of 10 items. Both values are greater than 0.70 so that it can be concluded that all research instruments are declared reliable. This shows that the instrument has excellent consistency and can be used in repeated studies with stable results.

The classical assumption test is an analysis stage that is carried out before regression testing to ensure that the data qualifies for a good regression model. This test aims to avoid bias in the analysis results and improve the accuracy of the research model. In this study, the classical assumption test includes the normality test, the linearity test, and the heteroscedasticity test.

The normality test aims to find out whether the data in the study is normally distributed or not. Normal distribution is one of the important requirements in linear regression analysis. The normality test in this study used the Kolmogorov-Smirnov method with the help of SPSS.

Table 3. Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		366
Normal Parameters ^{a,b}	Mean	.0000000
	Hours of deviation	7.96465177
Most Extreme Differences	Absolute	.033
	Positive	.033
	Negative	-.023
Test Statistic		.033
Asymp. Sig. (2-tailed)		.200 ^{c,d}

Source: Primary data processed, 2026

Based on the results of the Kolmogorov-Smirnov test, an Asymp value was obtained. Sig. (2-tailed) is 0.200. This value is greater than the significance level of 0.05 ($0.200 > 0.05$), so it can be concluded that the data is normally distributed. In addition, the test statistical value of 0.033 shows a very small deviation from the normal distribution.

The results of the hypothesis test showed that the experience of rafting tourism activities had a significant effect on the stress level of tourists in Pangalengan, Bandung Regency. This can be seen from the **calculated t value of 20.237** which is greater than **the t table of 1.966**. In addition, the significance value obtained is **0.000**, so it is smaller than 0.05. Based on these results, it can be stated that **H1 is accepted** and **H0 is rejected**. Thus, the experience of rafting tourism activities is proven to have a real influence on the stress level of tourists.

This influence shows that the tourist experience is not only limited to recreational activities, but becomes a psychological experience that is really felt by tourists. In the context of rafting, tourists not only enjoy the journey on the river, but also face challenges, build focus, and adjust to dynamic situations. This process is what makes the tourist experience directly related to the psychological condition of tourists. The stronger the experience felt, the greater the changes that arise in the stress level of tourists. This means that the travel experience and stress levels have an interrelated relationship in these activities.

If associated with the condition of the research site, the rafting area in Pangalengan has a natural character that supports the formation of an intense tourist experience. The Palayangan River with its varied currents, cool air, and beautiful natural scenery creates a different atmosphere from the daily routine of tourists. When participating in rafting, tourists not only interact with nature, but also fully engage in physical and emotional activities. This condition allows tourists to distract from daily stress. Therefore, the experiences formed at the research site are very likely to change the stress level of tourists.

In addition to natural factors, the rafting experience in Pangalengan is also influenced by social elements during the activity. Tourists must work together in a team, listen to the guide's directions, maintain the rhythm of the paddle, and support each other when facing the rapids. Situations like this create a sense of togetherness, involvement, and confidence after the activity

is over. The experience that is formed becomes more complete because it involves physical, emotional, and social aspects at the same time. Therefore, the influence of tourism experiences on stress levels in this study can be understood as the result of a combination of various elements of experience that are directly felt by tourists.

The results of this study are in line with the research of **Wirawan (2025)** which shows that spiritual tourism in Ubud plays a role in the process of self-recovery of tourists from stressful conditions to psychological balance. The study confirms that travel experiences that involve a calm atmosphere, meaningful activities, and emotional connectedness can help tourists' mental recovery. This finding is also in line with the research of Ridho and Saputra (2022) who stated that visits to resorts with natural nuances can be one of the efforts to reduce stress in urban communities. Both studies show that the travel experience that is directly felt can affect a person's stress state. This supports the results of the study that the experience of rafting in Pangalengan also has an influence on the stress level of tourists.

Furthermore, the results of this study are also in line with the research of Anam et al. (2024) who found that sport tourism-based programs were effective in improving mental health and lowering participants' stress levels. The research shows that involvement in tourism-based activities and sports is able to provide positive psychological changes. These results are also supported by research by Indrianty and Putri (2025) which states that tourists who take part in healing activities at Wana Wisata Ranca Upas experience a change in mental state for the better after the visit. These two studies reinforce that tourism activities that provide a direct, active, and enjoyable experience can affect the psychological state of visitors. Thus, the results of the research in Pangalengan are in accordance with empirical findings in other tourism contexts.

In addition, this research is also in line with Orvala et al. (2025) which shows that the holistic wellness retreat program has high effectiveness in helping to reduce visitors' stress levels. The study emphasizes that natural atmospheres, recovery activities, and positive emotional experiences are important elements in changing stress conditions. This finding can also be linked to the research of Wirawan (2025) which emphasizes that tourism experiences that provide calm, reflection, and connection with the environment are able to support the psychological balance of tourists. Although the context of the activity is different from rafting, the core of the findings remains the same, namely that a strong tourist experience can affect the mental state of visitors. This further strengthens that the results of the research in Pangalengan have an empirical basis that is in line with previous research.

Based on the results of previous research and research support, it can be emphasized that the experience of rafting tourism activities does have an important role in the stress level of tourists. This influence arises because the tourist experience formed in Pangalengan is not only entertainment, but also involves challenges, focus, social interaction, and closeness to nature. All these elements work simultaneously in shaping the psychological response of tourists during and after the activity. Therefore, the tourist experience can be seen as a real factor in influencing the stress condition of tourists. In other words, the stronger and more meaningful the experience felt, the greater the influence on the level of stress of tourists.

CONCLUSION

The conclusion of this study confirms that the main purpose of the study, namely to analyze the influence of the experience of rafting tourism activities on the stress level of tourists

in Pangalengan, Bandung Regency, has been empirically achieved. The findings of the study show that multidimensional travel experiences have a significant influence on reducing the stress level of tourists. This indicates that the more positive and quality of experience that tourists feel while participating in rafting activities, the greater the potential to reduce the psychological pressure they experience. Thus, the tourist experience not only serves as a source of recreational satisfaction, but also as an effective mental recovery mechanism for individuals amid the pressures of modern life. The main contribution of this research lies in strengthening studies in the field of tourism, especially the integration between the concept of tourist experience and psychological aspects in the form of quantitatively measured stress levels. This study expands on the literature that was previously more focused on tourist satisfaction and loyalty, by presenting empirical evidence that adventure tourism activities have a real impact on mental well-being. In addition, this research provides practical implications for tourist destination managers to design experiences that are not only physically and emotionally appealing, but also able to provide psychological benefits for tourists. However, this study has limitations, including the limited scope of locations that focus only on one destination and the use of quantitative approaches that have not fully explored the subjective experiences of tourists in depth. In addition, the variables studied were still limited to travel experiences and stress levels without considering other factors that may also affect psychological conditions. Therefore, further research is recommended to expand the scope of locations, using a mixed approach, and adding other variables such as satisfaction, subjective well-being, or environmental factors to gain a more comprehensive understanding of the relationship between tourism activities and mental health.

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