

Knowledge of Tour Guides in the Sekumpul Waterfall Buleleng-Bali Regarding Occupational Health and Safety

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ARTICLE INFO	ABSTRACT
ORCID ID Author 1:- Author 2:- Author 3:- Author 4:-	Occupational health and safety is an important thing to pay attention to in any activity, one of which is in the tourism sector. In the world of tourism, many tourism activities are offered by tourism business actors, which must pay attention to the health and safety of the tourism offered. The purpose of this study was to see the level of knowledge, attitudes, and behavior of tour guides at the Sekumpul Waterfall tour, Buleleng Regency, Bali regarding occupational health and safety. This research is a cross-sectional study using a descriptive-analytic approach with a one-group pretest-posttest research design. The sampling technique used accidental sampling. The number of samples in this study was 76 people. Data were analyzed descriptively quantitatively using the Paired Samples T Test and presented in the form of a frequency distribution table, then compared descriptively. The results showed that the level of knowledge in the good category of respondents before receiving education was 57.89 percent. Then after receiving education the level of knowledge of the respondents in the good category increased to 72.37 percent. Based on the Paired Samples T Test results, the value of p is 0.001 was obtained, which means education effectively increases respondents' knowledge regarding K3 in tour guides at Sekumpul Waterfall tour. Suggestions that can be recommended in this study are that the Sekumpul Waterfall tour manager needs to pay attention to the preparedness of the tour guide in carrying out his work. It is necessary to carry out periodic guidance related to Occupational Health and Safety and disaster preparedness.
Article History: Paper received:27-03-2024 revised: 23-05-2024 accepted: 26-05-2024	
Keywords: knowledge; tourism; sekumpul; OHS.	

1. Introduction

Tourism is a variety of tourism activities and is supported by various facilities and services provided by the community, businessmen, government, and local government. Tourism development is developed with an approach to economic growth and equity for people's welfare and development that is oriented towards regional development, is based on the community, and is empowering the community which covers various aspects, such as human resources, marketing, destinations, science and technology, cross-sector linkages, cooperation between countries, empowerment of small businesses, and responsibility in the utilization of natural and cultural resource (Ministry of Tourism and Creative Economy, 2016)

Tourism is categorized in the field of services and services. Currently, tourism has become the most important industry for the Indonesian nation in supporting state revenues. The development of tourism in Indonesia continues to increase from year to year with enormous and diverse potential to develop into an attractive tourist destination and become a major world tourist destination. Currently, nature tourism, combined with community participation in its social culture, is the prima donna favored by tourists (Ridlwani et al., 2017). What's more, after the COVID-19 pandemic, new tours began to emerge which became people's destinations, besides that tourists also began to look for destinations that prioritized health and safety.

Occupational health and safety is an important thing to pay attention to in any activity. In the world of tourism, many tourism activities are offered by tourism business actors, in this case tourists and companies that offer tourism activities must really pay attention to the security of the type of tourism offered because it relates to the health and safety of the tourists themselves and other parties as the guarantor. Responsible for the tourism activities offered. Therefore, a tourism activity that is built by the private sector or the government must apply standardized work health and safety procedures that have been recognized, and tourists must be really careful in determining what types of tourism activities are safe to do (Dzikri & Sukana, 2019).

Bali is currently still a world tourist destination. Bali recently received an award from the Tripadvisor Travelers' Choice Awards 2021. The Tripadvisor Travelers' Choice Awards themselves are an annual award from Tripadvisor where the winners are determined based on reviews, ratings, and what users share about destinations visited via Tripadvisor. Bali has various tourist destinations both natural, man-made, and cultural. Tourist destinations in Bali vary from beaches, places of worship, waterfalls, and other tours. Research by Wirawan, et al (2020) shows that 54.3% of tourist destinations in Bali have a low risk, 39.1% have a moderate risk, and 6.6% have a high risk. Of the high risks, including being on a waterfall tour. There have been incidents of falling or being bitten by animals along the way to the waterfall in the last 5 years. Bali has quite a lot of waterfall tours, one of which is famous is Sekumpul Waterfall (Wirawan et al., 2020)

Sekumpul Waterfall is one of the waterfalls in Bali whose charm is worldwide. There are 7 waterfalls in the Sekumpul waterfall area. To get to Sekumpul Waterfall, you have to go down hundreds of steep steps in several places and cross a river that is deep enough to arrive in front of the waterfall. Visiting Sekumpul Waterfall must be guided by a guide who will accompany tourists, in addition to explaining also remembering the risky route to the waterfall (IndonesiaTravel, 2022). There are risks that can occur during a trip to Sekumpul Waterfall, such as slipping, falling, being bitten by insects, being bitten by animals, being injured, and so on. Seeing the potential for accidents to occur, it is necessary to have a good understanding of the implementation of occupational health and safety at the Sekumpul waterfall. The purpose of this study was to see the level of knowledge, attitudes, and behavior of tour guides at the Sekumpul Waterfall tour, Buleleng Regency, Bali regarding occupational health and safety.

2. Method

This research is a cross-sectional study conducted using a descriptive-analytic approach with a one-group pretest-posttest research design. This research has passed ethical review

with number 01.044/UNBI/EC/I/2023. Data analysis was carried out using a quantitative descriptive method. In this study, respondents' knowledge regarding Occupational Health and Safety was measured using a questionnaire (pre-test) and then counseling regarding Occupational Health and Safety knowledge was carried out. After being given the pre-test, an intervention was given in the form of education regarding Occupational Health and Safety. After the intervention was carried out, respondents' knowledge was measured again (post-test) to see differences in respondents' knowledge levels. The research population is the people of Sekumpul Village, Buleleng Regency, Bali. The sampling technique used accidental sampling consisting of village people who became tour guides at the Sekumpul Waterfall tour who came during the intervention. The number of samples in this study were 76 people. The research instrument used was a questionnaire adopted from (Mamudi, 2016) previous research whose validity had been tested. In this study, the variables studied were Occupational Health and Safety (OHS) knowledge which was divided into 2 categories, namely a) good knowledge if the answer score was more than the mean, b) poor knowledge if the answer score was less than the mean (mean pretest: 6.87 and posttest: 7.99). Questions include definition, classification of work accidents, causes, losses, prevention, and assessment of work accidents. In addition to the knowledge variable, in this study, the attitude and behavior variables of the respondents regarding occupational health and safety were also taken. Then, the data obtained were analyzed descriptively quantitatively using the Paired Samples T Test and presented in the form of a frequency distribution table, then compared descriptively.

3. Result and Discussion

Characteristics of Individual Respondents including sex, age categories, level of education and working period showed in Table 1.

Table 1. Characteristics of Individual Respondents

Variabel	N	Percentage	Min	Max	Mean	SD
Sex						
Male	50	65,79				
Female	26	34,21				
Age Categories			19	52	33,09	±10,97
<=20 years	3	3,95				
21 – 30 years	35	46,05				
31 – 40 years	16	21,05				
>40 years	22	28,95				
Level of Education						
Elementary School	7	9,21				
Junior High School	10	13,16				
Senior High School	42	55,26				
University	17	22,37				
Working Period			1	9	3,09	±1,95
<=3 Year	51	67,11				
>3 Year	25	32,89				
Total	76	100				

Source: Primary Data, 2023

The data shows that most of the respondents are male (65.70%). Based on the age category, most of the respondents were in the age range of 21-30 years (46.05). The lowest age was 19 years and the highest age was 52 years with an average age of 33 years (SD = ± 11.27). At the level of education, it can be seen that most of the respondents had education at the

SMA/SMK level (54.55%). Regarding the years of service as tour guides, most of the respondents were ≤ 3 years (67.11%) with the longest working period being 9 years and the lowest being < 1 year with an average of 3 years ($SD = \pm 1.95$).

Respondents' knowledge was measured twice, namely before and after the intervention in the form of education. This intervention was carried out at one time, which began with giving a pre-test, conducting education related to Occupational Health and Safety for Tour Guides, and then ending with giving a post-test. Tabel 2 explained about respondent's knowledge level. Based on the results of the knowledge assessment, it can be seen that the level of knowledge in the good category of respondents before receiving education was 57.89%, with the lowest score being 4, the highest being 9, and the average being 6.87. Then after receiving education the level of knowledge of the respondents in the good category increased to 72.37%, with the lowest score being 6, the highest being 10, and the average being 7.99. Regarding the increase in knowledge before and after providing education individually, there were 56.58% of respondents increased, the remaining 30.26% remained the same and 13.16% decreased.

Table 2. Respondents Knowledge Level

Variable	N	Percentage	Min	Max	Mean
Score Level of Knowledge (Pre)			4	9	6,87
Good	44	57,89			
Less	32	42,11			
Score Level of Knowledge (Post)			6	10	7,99
Good	55	72,37			
Less	21	27,63			
Knowledge Improvement Category					
Still	18	23,68			
Decrease	10	13,16			
Increase	48	63,16			
Total	76	100			

Source: Primary Data, 2023

Based on the results of the Paired Samples T Test used to analyze the difference in mean of two paired samples, namely the pre-post knowledge of respondents before and after being given counseling, the value of $p < 0.05$ ($p = 0.001$) means that education is effective in increasing the knowledge of respondents regarding K3 on the tour guide on the Sekumpul Waterfall tour. Meanwhile, result of Pre-posttest respondent's knowledge scores was showed in table 3.

Table 3. Pre-Post Test Respondents' Knowledge Scores

Variabel	Mean Score (Pre)	Mean Score (Post)	p value	95% CI
Level of Knowledge	6,87	7,99	0,001	0,69 – 1,54

Source: Primary Data, 2023

Based on the attitude and behavior variables, it was found that most of the respondents' attitudes were in the good category (63.16%), while the behavior of the respondents was mostly in the less category (77.63%). Respondents' attitudes regarding the application of occupational health and safety when working as guides were mostly good, but the behavior of respondents regarding the application of K3 in guide work was in the less category because there were still many participants who did not wear shoes, did not wear gloves, did not wear

long sleeves and trousers, not wearing a hat, and not carrying a safety rope when doing work as a waterfall tour guide. The result of attitudes and behavior of respondent's showed in Table 4.

Table 4. Attitudes and Behavior of Respondents

Variabel	N	Percentage
Attitudes		
Good	48	63,16
Less	28	36,84
Behavior		
Good	17	22,37
Less	59	77,63
Total	76	100

Source: Primary Data, 2023

In data analysis, an analysis of the relationship between respondent characteristics and level of knowledge was carried out before the intervention was carried out (Pre-Knowledge) this data explained in the table 5. This analysis was carried out only on knowledge before intervention for the purpose of seeing what influenced this knowledge based on individual characteristics before education. The results showed that most of the pre-category knowledge scores were lacking in male sex (53.13%), working period \leq 3 years (56.25%), and education level in the SMA/SMK category (37.50%). Based on the chi square test on the variables of gender and years of service, as well as the Pearson test on the variable level of education on the respondent's pre-knowledge score, it was found that there was a relationship between gender and the respondent's pre-knowledge score, with a value of $p=0.047$. In addition, there is also a relationship between the level of education and the respondent's pre-knowledge score, with a value of $p = 0.001$.

Table 5. Relationship between Gender, Years of Service, and Education Level on Respondents' Pre-Knowledge Scores

	Knowledge Score (Pre)			p Value
	Less	Good	Total	
Sex				0,047
Male	17 (53,13%)	33 (75,00%)	50 (65,79%)	
Female	15 (46,88%)	11 (25,00%)	26 (34,21%)	
Work Period				0,086
\leq 3 year	18 (56,25%)	33 (75,00%)	51 (67,11%)	
$>$ 3 year	14 (43,75%)	11 (25,00%)	25 (32,89%)	
Level of Education				0,001
Elementary School	4 (12,50%)	3 (6,82%)	7 (9,21%)	
Junior High School	10 (31,25%)	0 (0,00%)	10 (13,16%)	
Senior High School	12 (37,50%)	30 (68,18%)	42 (55,26%)	
University	6 (18,75%)	11 (25,00%)	17 (22,37%)	
Total	32 (42,11%)	44 (57,89%)	76 (100%)	

Source: Primary Data, 2023

3.1 Respondents Knowledge Level

Trevethan (2017) in his research entitled "Deconstructing and Assessing Knowledge and Awareness in Public Health Research" states that knowledge is knowing the existence of

something or an understanding of the current situation or subject based on information or experience that has been obtained. Measurement of knowledge can be done by interviews or questionnaires in the form of questionnaires that ask about the content of the material to be measured by the respondents. Knowledge is considered good if it is able to express information from an object correctly (Trevethan, 2017). If you are only able to reveal a little information, then you are categorized as having poor knowledge (Rinawati et al., 2016). OSH knowledge means everything that is known related to OSH. This knowledge is influenced by intelligence that comes from information processing, differences in information obtained related to OSH, P2K3 not running optimally, OSH training, and OSH counseling.

The tour guide's knowledge regarding Occupational Safety and Health (K3) in the Sekumpul Waterfall Tourism Area is still relatively lacking because there are 42.11% of respondents still have insufficient knowledge. The application of Occupational Health and Safety in tourism is important, especially in tourist objects with extreme activities that need more supervision and skills (Sudana & Sukana, 2018). There are several aspects that need to be considered in K3 tourism so that they can increase the tour guide's knowledge in the Sekumpul Waterfall tourist area: a) the personal aspect which this aspect focuses on the skills or skills of the tour guide (guide) to prevent and handle accidents that may be experienced by the traveler; b) aspects of safety equipment consisting of PPE, the use of PPE when carrying out tourism activities can reduce risks and prevent work accidents and accidents while traveling, in addition to being a tourist attraction to try tourism activities without worrying about accidents when enjoying tourism; c) the health aspect of tourists, this is done to prevent occupational diseases to increase the safety and productivity of both guides and tourists, so a health check is necessary before carrying out tourism activities; d) environmental aspects, this aspect consists of the tourist object environment and the work environment (Dzikri & Sukana, 2019) (Kurniawan & Sukana, 2019) (Kusumaa & Suryawana, 2016) (Simon & Sukana, 2003)

3.2. Factors influencing the level of knowledge

Several studies say that there are internal and external factors that can affect accidents, one of which is at a tourist spot. With the application of K3 in tourist attractions, it can reduce the risk of accidents, and can form countermeasures and prevention. So that training and counseling are needed regarding K3 in tourist attractions on an ongoing and sustainable basis and increasing the tour guide's knowledge in developing tourist objects by implementing and strengthening the organization regarding Occupational Safety and Health (K3) (Simon & Sukana, 2003); (Kusumaa & Suryawana, 2016)

Knowledge plays an important role in every person's behavior (Rinawati et al., 2016). Evidenced in Susanto et al., (2019), research states that safe work behavior is influenced by knowledge, communication and personal protective equipment with each t-value of -2.396; 3.408; and 9,955.20. Related to Rinawati et al., (2016), also explained that in his research respondents who had high knowledge would be disciplined in using PPE. Also supported by the research of Oztas (2018) entitled "Knowledge Level, Attitude, and Behaviors of Farmers in Cukurova Region Regarding The Use of Pesticides" on 420 seasonal farmers in Karatas District, Adana Province, Turkey, found that inadequate knowledge about the safe use of pesticides and the use of protective equipment themselves can reduce farmers' safe work behavior from potential risks of pesticides (Öztaş et al., 2018). Related research was also conducted by Ismail et al., (2018), the results show that along with increased knowledge there will be positive

changes in attitudes related to HIV safety. That is, knowledge influences worker behavior where the lower the level of worker knowledge, especially related to OSH, the lower the safe work behavior of workers. This condition can also be seen from the results of the study that the majority of respondents still had less OSH-related behavior (77.63%).

4. Conclusion

Based on the results of the study it can be concluded that the level of knowledge of tour guide respondents in the Sekumpul Waterfall tourist area before the intervention mostly in the good category. After the intervention, the level of knowledge of respondents in the good category was increase. The results of the Paired Samples T Test showed education was effective in increasing respondents' knowledge regarding K3 in tour guides at Sekumpul Waterfall Tours. Regarding the attitudes and behavior of respondents, mostly of respondents had attitudes related to the implementation of OSH in the good category, but there were only a small part of respondents had good behavior regarding the implementation of OSH.

Suggestions that can be recommended in this study are that the management of the Sekumpul Waterfall tour, in this case, Sekumpul Village, needs to pay attention to the preparedness of the tour guide in carrying out its work. It is necessary to carry out periodic guidance related to Occupational Health and Safety and disaster preparedness. So that this tour guide is able to provide healthy and safe services to tourists visiting Sekumpul Waterfall.

Acknowledgments

I would like to thank the research team, the Buleleng tourism office and Auckland University for their collaboration. I also do not forget to thank the activities of the 5th International Scientific Meeting on Public Health and Sports (ISMOPHS) which provided input and improvements to this research article.

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