

ASSESSING HIKING PREPAREDNESS AND THE NEED OF *HIPREP-MY* MODEL DEVELOPMENT AMONG MALAYSIAN HIKER: A PILOT STUDY
(Menilai Kesiediaan Mendaki dan Keperluan Pembangunan Model *HiPrep-My* dalam Kalangan Pendaki Gunung Malaysia: Sebuah Kajian Rintis)

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Abstract

The implementation of a pilot study usually related to the validity and reliability of the instrument. Thus, the main purpose of this pilot study is to validate and test the reliability of the Hiking Preparedness Questionnaire which will be used as an instrument in the Need Analysis Phase in Design and Development Research (DDR) of *HiPrep-My* Model. This instrument consisted an adapted questionnaire from other researcher and has been modified to meet the need of Hiking Preparedness Model in Malaysia (*HiPrep-My*). This pilot study was implemented based on determined procedure and follow the standard of instrumentation. It involves three basic stages: pre-pilot study, during-pilot study and post-pilot study. At the first stage, all picked items of questionnaires that have been taken from other researchers went through the back-to-back translation procedure. Additional questions were added also in this stage. At the second stage, the modified questionnaire have been pilot tested among 30 hikers, (n=30) to get the validity and reliability of the items. At the final stage, the reliability evaluation of overall items was determined by the value of Cronbach's alpha. Hence, the instrument has obtained a validity and reliability when overall items of the questionnaire shown an alpha value of .707 ($\alpha=0.707$). As a results, this pilot study accomplished and the instrument can be used in the main study as a first phase of developing the *HiPrep-My* Model.

Keywords: Pilot study, validity, reliability, hiking preparedness, model development.

Abstract

*Perlaksanaan sebuah kajian rintis sering dikaitkan dengan kesahan dan kebolehpercayaan sesuatu instrumen. Oleh yang demikian, tujuan utama kajian rintis ini adalah untuk mengesah dan menguji kebolehpercayaan Soal Selidik Kesiediaan Mendaki yang akan digunakan sebagai instrumen di dalam Fasa Analisis Keperluan dalam Penyelidikan Reka bentuk dan Pembangunan (DDR) Model *HiPrep-My*. Instrumen ini mengandungi soal selidik yang telah diadaptasi dari penyelidik lain dan telah diubahsuai bagi memenuhi keperluan Model Kesiediaan Mendaki di Malaysia (*HiPrep-My*). Kajian rintis ini telah dilaksanakan berdasarkan prosedur yang telah ditentukan dan mengikuti piawaian instrumentasi. Ia melibatkan tiga peringkat asas: pra-kajian rintis, semasa-kajian rintis dan pasca-kajian rintis. Pada peringkat pertama, kesemua item soal selidik yang telah diadaptasi dari penyelidik lain telah melalui prosedur terjemahan back-to-back. Soalan tambahan juga dimasukkan pada peringkat ini. Pada peringkat kedua, soal selidik yang telah diubahsuai telah diuji rintis terhadap 30 orang pendaki, (n=30) bagi mendapatkan kesahan dan kebolehpercayaan item-item. Pada peringkat terakhir, penilaian kebolehpercayaan keseluruhan item telah ditentukan dengan nilai pekali Cronbach's alpha. Sehubungan dengan itu, kesahan dan kebolehpercayaan instrumen telah diperolehi apabila keseluruhan item soal selidik ini menunjukkan nilai pekali alpha .707 ($\alpha=0.707$). Kesimpulannya, kajian rintis ini telah berjaya dan instrumen boleh digunakan di dalam kajian sebenar sebagai fasa pertama pembangunan model *HiPrep-My*.*

Kata kunci: Kajian rintis, kesahan, kebolehpercayaan, kesiediaan mendaki, pembangunan model.

1.0 INTRODUCTION

Pilot study is an essential step to obtain the validity and to determine the level of reliability of the implemented questionnaire. This step is vital in order to get a valid and reliable set of data through the pilot test before going through an actual study. In fact, Merriam (2009) and Sekaran (1993) stated that pilot study need to be conducted before the actual study in order to get a valid and reliable finding using a valid and reliable questionnaire. Reliability is refer to the consistency of data that have been obtained through the data collection procedure. Besides, level of reliability also depend on the construct and content of the items in the questionnaire. While, validity is refer to the evaluation upon the suitability in the translation and action taken on the test's scores (Neuman, 2012; Noraini Idris, 2013).

This pilot study has been conducted among 30 samples which were local hikers. The samples were not part of the main study. Number of samples is appropriate and sufficient for the research in social sciences field (Creswell, 2007; Hertzog, 2008). Researcher has chosen the certain hiking spots which were located in East and West Malaysia (Bukit Changkat Asa, Selangor), (Bukit Broga, Selangor), (Gerehang Fall, Perak), (Strata Fall, Perak), (Bukit Broga, Selangor), (Bukit Kutu, Selangor) and (Gunung Kinabalu, Sabah). This choices have been made because the hiking spots are frequently hikes by tons of hikers. Furthermore, this places are easy to access and have an internet coverage (Esfahani, 2014). This have met the characteristics of the main study that will cover many hiking places all over Malaysia (Syaubari & Yunus, 2018).

2.0 BACKGROUND

2.1 Concept of Pilot Study

First and for most, this pilot study was conducted in order to get a validated and reliability tested instrument for a Need Analysis Phase in Design and Development Research (DDR). This approach have been chosen by researcher to develop a Hiking Preparedness Model in Malaysia (HiPrep-My). In the DDR, basically there are 4 research phases (Richey & Klien, 2007), which consists:

- a) Need Analysis Phase
- b) Design Phase
- c) Development Phase
- d) Evaluation Phase

Hence, researcher will use the results from this pilot study, purposely to support the first phase of developing a *HiPrep-My* Model. According to (DeWitt, Alias, & Siraj, 2014), the instruments that will be used in need analysis of DDR such as questionnaires must be validated and tested it's reliability. For this pilot study, researcher has done a survey that using a questionnaire-based instrumentation. This method is appropriate to get a feasible data of need analysis (McKillip, 1998). So, in this quantitative method, the finding from the Hiking Preparedness and Need Analysis Questionnaire which has been adapted and modified was tested and validated.

2.2 Procedure of Pilot Study

Pilot study is an essential part of the main study and need to be conducted wisely. It consists the specified procedure (Hassan, Schattner, & Mazza, 2006). According to Lancaster, Dodd, & Williamson, (2004) & Noraini Idris (2013), a well-conducted pilot study, giving a clear list of aims and objectives within a formal framework will encourage methodological rigour, ensure that the work is scientifically valid and publishable. Hence, based on their recommendation, researcher has implemented the procedure of this study as shown in Figure 1.

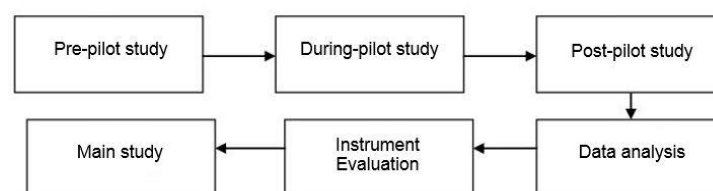


Figure 1: Procedure of pilot study

2.3 Pre-pilot Study

The questionnaire-based instrument of this pilot study have been adapted from two open-to-public questionnaires which both related to defining a hiking preparedness. One was from Mason, Suner, & Williams (2013) and another one from Scheunemann (2011). Researcher has taken these questionnaires into the back-to-back translation procedures (Brislin, 1986; Sperber, 2004). The procedures were:

- a) Picked items from questionnaires were translated from the original language (English) to targeted language (Malay) by researcher.
- b) The translated questionnaires checked and corrected by an expert of English language. In this study, researcher has submitted the script to a Senior Lecturer at Faculty of Human Development, Universiti Pendidikan Sultan Idris, Malaysia
- c) The corrected questionnaires by the English language expert was submitted to Malay language expert for amendment as this instrument will run in Malay language. In term of this study, a Senior Lecturer of Language Centre, Universiti Pendidikan Sultan Idris, Malaysia has been assigned.
- d) The Malay version's questionnaire has been translated back to English language by the researcher without looked at the original version. The back translation was verified by the same English language expert. This process was held to make sure that the meaning of items remained the same.
- e) The final Malay version that has been validated by languages expert was sent to content's expert for verification in terms of content. In this study, a questionnaire has been verified by a Senior Lecturer from Faculty of Sports Science and Recreation, Universiti Teknologi Mara, Malaysia.

Next, in order to answer the research questions (RQ) of the pilot study which are:

- a) What is the level of preparedness among hikers in Malaysia?
- b) Is there a need of developing a *HiPrep-My* Model?

Researcher has added few items for the second RQ answerability and the nature of need analysis question at the end of the adapted questionnaire. This modification has been verified, again, by the experts of language and content (Abdul Muqsith, 2018; Azli Ariffin, 2018). Then, this finished questionnaire were ready to be tested among targeted samples.

2.4 During-pilot Study

The questionnaire that have been verified by experts has been distributed to 30 samples using an online-survey within two weeks. Convenience sampling were selected for this pilot study. This technique was chosen because the population of hikers in Malaysia was unclear. So the best way to collect the data for this study was non-probability sampling (Siti Hajar, Salamiah A., Norzuwana, & Norliza, 2015).

The *Google Form* was created as a tool to collect the data from the samples. Hence, researcher has sent the online form via social media such as *Facebook* and *WhatsApp* among hiker's groups. All hikers have be informed to answer the form just before they started the hiking trips. Besides, researcher has spread the QR code that linked to the online form at the trailheads while waiting for online responses. This cross-sectional survey was implemented as a backed-up strategy to reach the number of samples as soon as possible.

2.5 Post-pilot Study

The reliability of the questionnaire is the repeatability or consistency of the measures (Esfahani, 2014; Ishtiaq, 2019) . Thus, through this post-pilot study, researcher has merged the data analysis and instrument evaluation process as these process were happen after the questionnaire has been distributed and data have been collected.

Data from the tested instrument were analysed using the Cronbach's alpha reliability test. This process was tooled by IBM SPSS version 24. The Cronbach's alpha is one of the most widely used metric for reliability evaluation (Christmann & Van Aelst, 2006; Pandey, 2016). Instrument was evaluated to find an alpha value which represent the validity and reliability of overall item. It is sufficient since this instrument was not dimensional constructed (Wells, Hansell, & Nicholson, 2007).

3.0 FINDINGS

Respondents were hikers (n=30), who wanted to begin a hike at local hiking area. Table 1 shows the demographic characteristics of the respondents in this pilot study. More than half (63.3%) were female. Most (56.7%) of the respondents were in 18 to 28 group of aged. Experience of less than a year were the most (50%) respondent's level. Besides, majority of respondents (76.7%) were medium of physically fitness.

Based on Mason et al. (2013), prepared hiker is defined as carrying more than 7 essential items out of 10. Surprisingly the highest number of hiker (46.7%) were carried less than three essential items. Only (10%) of them carried more than 7 essential items and (10%) of respondents carried all 10 items. While, majority of the respondents (56.7%) were agree of the need of *HiPrep-My* Model development.

Table 1: Demographic characteristics of participants and essentials item carried by each group

Characteristics	Number of hikers n = 30 (% of total)	Prepared hikers n = 6 (% of subgroup) ^a
Sex		
Male	11 (36.7)	3 (50.0)
Female	19 (63.3)	3 (50.0)
Age groups		
<18	0 (0)	0 (0)
18-28	17 (56.7)	4 (66.7)
29-38	8 (26.7)	1 (16.7)
39-49	5 (16.7)	1 (16.7)
>50	0 (0)	0 (0)
Experience level		
1st time	3 (10.0)	0 (0)
<1 year	15 (50.0)	2 (33.3)
>1 year but <5 years	7 (23.3)	2 (33.3)
>5 years but <10 years	4 (13.3)	2 (33.3)
>10 years	1 (3.3)	0 (0)
Fitness level		
Lowest	0 (0)	0 (0)
Low	0 (0)	0 (0)
Medium	23 (76.7)	3 (50.0)
High	7 (23.3)	3 (50.0)
Highest	0 (0)	0 (0)
Essential items		
<3	14 (46.7)	
3 to 7	10 (33.3)	
>7	3 (10.0)	
All 10 items	3 (10.0)	
Need of HiPrep-My Model		
Development	0 (0)	
Totally disagree	0 (0)	
Disagree	3 (10.0)	
Likely agree	17 (56.7)	
Agree	10 (33.3)	
Totally agree		
a "Prepared" hiker is defined as carrying >7 essential items. This column percentage is calculated from the total of subgroup (n = 6).		

The Cronbach's alpha were calculated for the overall items (N=46) of the questionnaire. The overall items were exclude demographic items. Alpha values of the Hiking Preparedness for Need Analysis of *HiPrep-My* Questionnaire were $\alpha = 0.707$. Based on arguments of Nunally & Bernstein (1994), considerable and sufficient reliability of alpha value is 0.6 whereas an alpha value of 0.7 or above is acceptable and a good indication of reliability. This indicated that the pilot tested instrument was acceptable and reliable for the data collection of the main study. Table 2 shows the reliability statistics of the instruments.

Table 2: Reliability statistics of the pilot study

No. of Respondents	No. of Items	Value of Cronbach's Alpha
30	50	0.707

4.0 DISCUSSION

The questionnaire that has been used in this pilot study was validated and reliability tested. It followed the specified procedure as stated by Hassan et al. (2006) which involved the panel of expert. The language was validated by the both English and Bahasa Melayu experts. As well as the content of the questions was validated by the experts of content (Sperber, 2004). This process illustrated the face and content validity of the hiking preparedness and need analysis questionnaire which will be used in the main study (Esfahani, 2014). This has proven that this questionnaire is readable and answerable by the targeted respondents.

Hence, researcher has also tested the reliability of the questionnaire using a Cronbach's alpha analysis. The questionnaire has scored $\alpha = 0.707$ which indicated the good acceptance in terms of reliability of overall items in the particular questionnaire (Cho & Kim, 2015; Nunally & Bernstein, 1994; Pandey, 2016; Santos, 1999; Tavakol & Dennick, 2011). This alpha value was calculated the item's consistency that measured the essential variables. On top of that, as expected, researcher managed to describe the majority of the respondents were not well prepared based on the finding which seek for solution (McKillip, 1998). Researcher consisted the need of *HiPrep-My* Model development as the main study. Apparently, most of respondents were agree that this model should be developed.

5.0 CONCLUSION

This paper has discussed the implementation of the pilot study which involved the objective, sampling technique, approached method and finding. The instrument's validity and reliability have been measured and implemented by the specified criteria of procedure which were stated earlier. As a results, the validity and reliability of the items have been recognized and is acceptable. This is very important as this pilot study is a beginning of the main study exposure to researcher.

The finding shows that instrument has a good Cronbach's alpha value which indicates the acceptable reliability. In conclusion, this pilot study has managed to evaluate the reliability of the questionnaire. Thus, this questionnaire can be used as a valid and reliable instrument to collect the reliable and valid data in the further main study. However, researcher admit that this pilot study is not an easy steps and need to be implemented in a correct way. Therefore, researcher hope that this paper can help readers to understand the process of pilot study which based on prominent and established study.

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