

Reliability test of a questionnaire to investigate behaviour of using traditional medicines among urban students of Elementary School

Riska Cahyani¹, Aris Widayati¹

¹Faculty of Medicine and Health Sciences, Department of Pharmacy, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia

Corresponding author: ariswidayati@umy.ac.id

ABSTRACT

Introduction. The use of traditional medicine among the adult population is prevalent. Previous studies have explored the use of traditional medicine among adults. However, traditional medicine usage among adolescents is still rare, especially among elementary school students. Therefore the instruments for research on the use of traditional medicine among adolescents are also still limited. **Objective.** This study aims to calculate the reliability scale of a questionnaire based on the Theory of Planned Behavior. The questionnaire can be used to explore the behavior of using traditional medicine among elementary school students. **Methods.** The tested instrument has been assessed for its content validity using a professional judgement approach and language clarity. In this study, instrument reliability was calculated using Cronbach Alpha approach. The test respondents were elementary school students in Yogyakarta City namely SD Negeri Ungaran Yogyakarta. Fifty respondents were selected using purposive sampling and given a self-administered questionnaire. Data were entered and calculated for Cronbach Alpha using SPSS software. **Results.** Twelve percent of the 50 data sets were ineligible for inclusion due to incomplete answers, resulting in 44 data sets (88%) being analysed. The analysis produces a Cronbach's Alpha scale of 0.840 with 24 items in the questionnaire. **Conclusion.** The conclusion is that the instrument is reliable because the scale of Cronbach's Alpha is more than 0.60 as the standard point. It can be used to investigate a behaviour regarding traditional medicines usage among Elementary Students in urban areas.

Keywords: Reliability test, TPB Questionnaire, Elementary School, Traditional Medicine.

INTRODUCTION

Indonesia is rich in natural resources used for generations as traditional medicine. Traditional medicine is part of cultural knowledge and experience used to maintain health, prevent or treat various physical ailments (Widiarti et al., 2016). The use of traditional medicine is still held firmly by some people in Indonesia as an effort to maintain health. More than 7,000 of 30,000 plant species are used as medicine (Adiyasa & Meiyanti, 2021). More than 9,609 types of plants in Indonesia are used as medicinal ingredients, including 940 species used as traditional medicines (Yassir & Asnah, 2019).

Basic Health Research (Riskesdas) data in 2013 revealed that around 30.4% of Indonesia's population had used traditional medicine. In the Province of D.I Yogyakarta, the use of traditional medicine reached 44.0%, with the type of herb reaching 58.1%. Residential characteristics also have an influence, where the proportion of households using traditional medicine in urban areas (32.2%) is higher than in rural areas (28.7%). Based on the type of herb, the main reason for using it was to maintain health and fitness (52.7%), followed by tradition (12.3%), effectiveness (18.4%), experimentation (2.8%), desperation (1.8%), and cost considerations (6.8%) (Ministry of Health RI, 2013). Research on traditional or herbal medicines has been conducted in many Indonesian communities and adolescents. For example, research by Abadi & Widayati (2022) involved 78 respondents from the Demak Model Pharmacy Vocational School, which showed that 35% of respondents used traditional medicine at least once a month. However, research on the use of traditional

medicines in children still needs to be improved (Abadi & Widayati, 2022).

Elementary school is a stage of primary education for children aged 6-12 years who have an essential role in their developmental stages (Istiqomah & Suyadi, 2019). Data from the Ministry of Education and Culture shows that the number of elementary school students in DIY reaches 274,729 children (Kemdikbud, 2023). This study involved Yogyakarta Unggaran 1 Elementary School as a model elementary school in an urban environment, with 688 students in 2023. Special attention is needed in managing children's health, given their tendency to be susceptible to disease. Although many medicinal plants are used as traditional medicine in Indonesia, children rarely consume herbal medicines or are attracted to herbal medicine (Setiawan et al., 2018).

Better health behaviour levels have a positive impact on overall health status. The Theory of Planned Behavior (the intention to take health action (Widayati, 2019). This intention is influenced by three main factors: Attitude, Subjective Norms, and Perceived Behavioral Control (Ajzen, 2016).

Although traditional medicines are common among adults, their prevalence among adolescents, especially primary school students, is still under-explored. Instruments to investigate traditional medicine use among adolescents are still urgent. Therefore, this study aims to calculate the reliability scale of a questionnaire based on the Theory of Planned Behavior. This questionnaire can be used to explore the behaviour of using traditional medicine among elementary school students based on the Theory of Planned Behavior concept.

LITERATURE REVIEW

Traditional medicine is an integral part of Indonesia's cultural heritage, consisting of natural ingredients such as plants, minerals and animal ingredients, or a combination of the three. The use of traditional medicine has been passed down from generation to generation and follows the norms prevailing in society (Ministry of Health, 2018). Traditional medicine has essential cultural values and is considered an effort to support health (Dewantari, 2018). Among the known traditional medicine types are Jamu (Bahasa Indonesia), standardized herbal medicines, and phytopharmaca (Pratiwi et al., 2018). Jamu, in particular, is a traditional medicine widely known and used by the public (Adiyasa & Meiyanti, 2021). For example, Basic Health Research in 2010 showed that the prevalence of herbal medicine consumption in Indonesia was higher in urban areas (64.29%) compared to rural areas (53.37%) (Ministry of Health RI, 2010). Examples of herbal medicine are Beras Kencur (Bahasa Indonesia) and Kunir Asem (Bahasa Indonesia) (Putriana & Sugoro, 2013). Children in the age range of 6-12 years experience essential development in thinking and behaviour. They enter a more serious stage of education and are better prepared to understand more complex concepts (Setiawan et al., 2018). Children's growth and development affect their desire and ability to learn and participate in various activities (Istiqomah & Suyadi, 2019). Nonetheless, children's knowledge about using traditional medicines, such as herbal medicine, still needs to be improved, even though many medicinal plants are around them (Setiawan et al., 2018).

The Theory of Planned Behavior (TPB) suggests that intentions influence a person's behaviour. Three main factors in the TPB can predict behavioural intention:

1. Attitude: An individual's attitude towards a behaviour plays a role in shaping intention. Attitude includes an individual's view of the benefits and disadvantages of this behaviour (Widayati, 2019). Research by Laila et al. (2022) showed that a positive attitude is related to treatment intentions.
2. Subjective Norms: Subjective norms reflect an individual's perception of social pressure to behave in a certain way. This is influenced by individual beliefs and other people's views of this behaviour (Mihartinah & Coryanata, 2019). Various studies have shown that subjective norms significantly influence behavioural intentions (Suwarni & Selviana, 2015; Karos & Widayati, 2022).
3. Perception of Behavioral Control: This refers to an individual's beliefs about the extent to which he has the resources and opportunities to perform certain behaviours (Mahyarni, 2013). This behavioural control has been shown to positively affect behavioural intention to use traditional medicine (Laila et al., 2022).

Behaviour measurement often uses a Likert Scale in the form of a questionnaire. Respondents were asked to provide an assessment of the statement with a score range that describes the level of agreement or disagreement with the statement (Gayatri, 2014). This Likert scale can provide insight into the perceptions and attitudes of

respondents towards the behaviour of using traditional medicine.

In the context of this research, several previous studies have been conducted and become a reference. For example, Zaini & Soediono (2018) found that subjective attitudes and norms jointly influence consumer intentions in using herbal medicines. Widarti et al. (2016) showed that attitude factors and perceptions of the seriousness of the disease influenced the use of local wisdom as traditional medicine. Likewise, research by Sarmiento (2016) found that attitude did not affect the intention to buy herbal medicine, but the intention to buy herbal medicine did affect the act of buying. Therefore, this study brought a different approach by taking a sample of Yogyakarta 1 Elementary School students as respondents.

METHOD

This study used a cross-sectional design and quantitative data. This study aims to calculate the reliability scale of a questionnaire based on the Theory of Planned Behavior. This questionnaire can be used to explore the behaviour of using traditional medicine among elementary school students based on the Theory of Planned Behavior concept. This questionnaire was previously tested for validity and a language comprehension test. So, this study only conducted reliability tests.

The sample for testing this questionnaire was determined as many as 50 students taken purposively. The inclusion criteria were grade 5 students willing to complete the questionnaire. At the same time, the exclusion included students who did not fill out the questionnaire entirely or had never used traditional medicine. The test included distributing and filling out questionnaires by respondents and evaluating the instrument's reliability. Data analysis was performed using SPSS version 22 to calculate the Cronbach Alpha value in the reliability test of this questionnaire.

RESULT AND DISCUSSION

In the initial phase of the analysis, 12% of the total 50 data sets did not meet the inclusion criteria due to incomplete answers. A total of 44 data met the criteria and were used in further analysis.

The test results showed a Cronbach Alpha value of 0.840 for the 24 question items on the tested questionnaire. This instrument is reliable, with Cronbach's Alpha values exceeding the recommended threshold. Good Cronbach Alpha values range from 0.7 to 0.95 (Tavakol & Dennick, 2011). These results indicate that the questionnaire instrument tested has a good level of consistency in measuring the factors studied (Bolarinwa, 2015).

These results also indicate that the initial data collection stage has challenges regarding incomplete answers, in which 12% of the data set must be excluded. This can be an essential consideration for future researchers that when involving elementary school students, they must be accompanied better so they can complete the questionnaire. However, of course, the intended assistance is not to affect the respondents' answers, only to ensure that the questionnaire is completed thoroughly.

CONCLUSION AND RECOMMENDATION

This analysis produces a Cronbach Alpha reliability coefficient of 0.840 for a questionnaire of 24 items. This result indicates good internal consistency. This instrument can be used to examine the behaviour of using traditional medicines among elementary school students in urban areas. Further research is needed to broaden the application of this instrument to other contexts and age groups to enable a comprehensive understanding of data on traditional medicine use behaviour.

REFERENCE

- Abadi, B. B. A., & Widayati, A. (2022). Profile of The Use of Traditional Medicines Among Adolescents in SMK Farmasi Teladan Demak. *Journal of Pharmaceutical Sciences and Community*, 19(2), 71–77. <https://doi.org/10.24071/jpsc.003638>
- Adiyasa, M. R., & Meiyanti, M. (2021). Pemanfaatan obat tradisional di Indonesia: Distribusi dan faktor demografis yang berpengaruh. *Jurnal Biomedika dan Kesehatan*, 4(3), 130–138. <https://doi.org/10.18051/JBiomedKes.2021.v4.130-138>
- Adliyani, Z. O. N. (2015). *Pengaruh Perilaku Individu terhadap Hidup Sehat*.
- Ajzen, I. (2016). Consumer attitudes and behavior: The theory of planned behavior applied to food consumption decisions. *Italian Review of Agricultural Economics*, 121-138 Pages. <https://doi.org/10.13128/REA-18003>
- Anggita, A. D., Purnamasari, I., & Rais, R. (2021). Analisis Faktor-Faktor Yang Mempengaruhi Perilaku Menyimpang Pada Anak Usia Sekolah Dasar di SD Negeri Pleburan 03 Semarang. *Harmony: Jurnal Pembelajaran IPS dan PKN*, 6(1), 1–5. <https://doi.org/10.15294/harmony.v6i1.43951>
- Bolarinwa OA. Principles and methods of validity and reliability testing of questionnaires used in social and health science research. *Niger Postgrad Med J*. 2015;22(4):195–201. <https://doi.org/10.4103/1117-1936.173959>
- Karos, V. A., & Widayati, A. (2022). Intensi Swamedikasi di Kalangan Masyarakat Kecamatan Umbulharjo Yogyakarta Pada Masa Pandemi Covid-19: Tinjauan Theory Of Planned Behavior. *Jurnal Kefarmasian Akfarindo*, 20–28. <https://doi.org/10.37089/jofar.vi0.155>
- Dewantari, R. (2018). *Jenis Tumbuhan yang Digunakan sebagai Obat Tradisional Di Daerah Eks-Karesidenan Surakarta*.
- Gayatri, D. (2014). Mendesain Instrumen Pengukuran Sikap. *Jurnal Keperawatan Indonesia*, 8(2), 76–80. <https://doi.org/10.7454/jki.v8i2.151>
- Istiqomah, H., & Suyadi, S. (2019). Perkembangan Fisik Motorik Anak Usia Sekolah Dasar Dalam Proses Pembelajaran (Studi Kasus di SD Muhammadiyah Karangbendo Yogyakarta). *El Midad*, 11(2), 155–168. <https://doi.org/10.20414/elmidad.v11i2.1900>
- Laila, S., et al. (2022). *(Community Perception Through Theory of Planned Behavior (TPB) Approach with Treatment of Dental Pain in East Banjarmasin District)*.
- Mihartinah, D., & Coryanata, I. (2019). Pengaruh Sikap Terhadap Perilaku, Norma Subjektif, dan Kontrol Perilaku Persepsian Terhadap Niat Mahasiswa Akuntansi Untuk Mengambil Sertifikasi Chartered Accountant. *Jurnal Akuntansi*, 8(2), 77–88. <https://doi.org/10.33369/j.akuntansi.8.2.77-88>
- Pratiwi, R., Saputri, F. A., & Nuwarda, R. F. (2018). Tingkat Pengetahuan dan Penggunaan Obat Tradisional di Masyarakat: Studi Pendahuluan Pada Masyarakat di Desa Hegarmanah, Jatinangor, Sumedang. *Dharmakarya*, 7(2). <https://doi.org/10.24198/dharmakarya.v7i2.19295>
- Putriana, F., & Sugoro, I. (2013). *Analisis Cemarkan Mikroba Pada Sediaan Jamu Gendong Di Sekitar*. 4.
- Sarmento, T. A. (2016). *Modifikasi Model Theory Of Planned Behavior*. 27(3).
- Setiawan, I., Suharyanto, S., & Dianto, R. (2018). Peningkatan Pengetahuan Tentang Jamu Pada Siswa-Siswi di Sekolah Dasar Negeri 1 Boyolali. *Jurnal Surya Masyarakat*, 1(1), 54. <https://doi.org/10.26714/jsm.1.1.2018.54-58>
- Suharyat, D. Y. (2004). *Hubungan Antara Sikap, Minat dan Perilaku Manusia*.
- Suwarni, L., & Selviana, S. (2015). Inisiasi Seks Pranikah Remaja dan Faktor Yang Mempengaruhi. *Jurnal Kesehatan Masyarakat*, 10(2), 169. <https://doi.org/10.15294/kemas.v10i2.3378>
- Tavakol M, Dennick R. Making sense of Cronbach's Alpha. *Int J Med Educ*. 2011; 2:53–5. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Yassir, M., & Asnah, A. (2019). Pemanfaatan Jenis Tumbuhan Obat Tradisional di Desa Batu Hampan Kabupaten Aceh Tenggara. *Biotik: Jurnal Ilmiah Biologi Teknologi dan Kependidikan*, 6(1), 17. <https://doi.org/10.22373/biotik.v6i1.4039>