

Pilot Study: Determine Psychological Trauma Level among Post Earthquake Children using Instrument The Child PTSD Symptom Scale For DSM-V (CPSS-V SR)

Jumilia^{1,3}, Jayasree S. Kanathasan^{2*}

¹Faculty of Nursing Lincoln University College Malaysia, Wisma Lincoln.47301 Petaling Jaya, Selangor, Malaysia, liajumilia1987@gmail.com

²Faculty of Applied Sciences Lincoln University College Malaysia, Wisma Lincoln Petaling Jaya, Selangor, Malaysia, k.jayasree@lincoln.edu.my

³Nursing Study Program, STIKes Indonesia, Padang, Indonesia, liajumilia1987@gmail.com

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Abstract

The Child PTSD Symptom Scale For DSM-V (CPSS-V SR) can be used to measure changes in PTSD symptoms and assess for childhood and adolescent PTSD diagnoses After conducting validity and reliability tests. The Child PTSD Symptom Scale for DSM-V (CPSS-V SR) instrument was proven to be valid and reliable for measuring psychological trauma in children post earthquake. The goal of this study is to identify psychological trauma level among post earthquake children, in the pilot study, these components include 20 questionnaire about psychological trauma earthquake. As a result, prototype research was carried out to evaluate the measuring instrument's validity and reliability. The population in the present investigation is 30 children (7-12 years) post earthquake in Kajai West Pasaman West Sumatera Indonesia, sample using a simple random sampling technique. This research using Instrument The Child PTSD Symptom Scale For DSM-V (CPSS-V SR) discusses the topic of psychological trauma level post earthquake. The study applied validity and reliability to all parameters to verify that participants' replies were consistent. The experts validated the legitimacy of the content and dependability, and the data was analyzed using SPSS version 24. The study's findings revealed that instrument CPSS-V SR such measurements are accurate, and data for pilot studies indicate that the data is statistically significant. The concluding part illustrates how this research contributes significantly to provide nursing interventions to reduce psychological trauma in children post earthquake.

Keyword : CPSS-V SR; Reliability, Validity

Introduction

Indonesia is a disaster prone country, rating 35 among the countries most prone to disaster risk in the world. Indonesia is prone to disasters Geographically. The large population makes the disaster a risk of causing many experienced (Intan, 2021). Reporting from the National Disaster Management Agency (BNPB), this condition make Indonesia to be prone to disasters, such as volcanic eruptions, earthquakes, tsunamis, floods and landslides (Muhari, 2024). According BMKG (Meteorology, Climatology and Geophysics Agency) only monitors earthquake events in Indonesia, because earthquakes cannot be predicted when they will occur, including the day, date, hour, minute or second (CNN, 2024).

Earthquake incidents in Indonesia for the year 2023 were scaled up to 10.789 (Mahrofi, 2023). The Disaster Risk Index in Indonesia (BNPB, 2023) shows that 59.14% of cities sor /regencies in Indonesia have a high risk class for earthquake, 39.88% in the medium risk class, and 0.97% of districts or /cities have a low risk index for earthquake (Pkp.pasca, 2024). The occurrence of this earthquake had a considerable impact on the various aspects of human life, such as social,

economic, health and other aspects. One of them has impact on health, namely mental health. This mental health will cause long term effects if not helped quickly. Psychological impact is often overlooked especially in children trauma. Several symptoms of psychological trauma may persists for some time or up to at least 6 months since the individual experiences the event which caused the trauma. Sometimes, if trauma is not handled well, it can lead to post traumatic syndrome disorders (McNally, 2023).

The symptoms of psychological trauma experienced by individuals include increased and unpredictable intensity of anger, mood swings, anxiety, depression, clear and recurring memories of the traumatic event, clinical symptoms such as rapid heartbeat, headaches, nausea, chest pain, confusion, difficulty in concentrating, fear that the traumatic event will happen again, poor appetite, and inability to concentrate (Fayed A et al., 2023). The effects of traumatic symptoms in children such as traumatic. Symptoms of post-traumatic stress in children can last up to 30 years. If not addressed, it can have an impact on growth and development. Psychological changes for earthquake experienced are usually marked by the onset of psychotic symptom and Post Trauma Symptom Disease (PTSD). Children are a group that has a higher risk factor for experiencing symptoms. The effects of traumatic symptoms in children such as traumatic. Symptoms of post-traumatic stress in children can last up to 30 years. symptoms caused in children such as fear, anxiety depression, difficulty thinking and impaired concentration (Srimulyani, 2022). The symptoms of trauma experienced by the individual are a normal reaction if the individual has just experienced a traumatic event (Trihantoro & dkk., 2016).

Children have special needs and vulnerabilities when compared to adults, mainly due to dependence on others, developing physical and mental abilities and lack of life experienced in solving various problems. Post-traumatic stress disorder (PTSD) is a condition when a person experiences stress later in life. It is also suggested that children may endure traumatic events, which is a contributing factor to PTSD (Irwanto, 2020). Psychological changes for earthquake experienced are usually marked by the onset of psychotic symptom and Post Trauma Symptom Disease (PTSD). A group that is more likely to experience symptoms is children. the results of traumatic symptoms in kids, like injuries. Post-traumatic stress disorder (PTSD) symptoms can last up to thirty years. Children experience symptoms like dread, worry, depression, difficulties focusing, and problems thinking (Srimulyani, 2022).

Research result Foa et al, 2017 about Psychometrics of the Child PTSD Symptom Scale for DSM-5 for Trauma-Exposed Children and Adolescents that Instrument versions of the CPSS-5 scales are valid and reliable measures of DSM-5 PTSD symptomatology in traumatized youth (Foa, 2017)

A pilot study was carried out with the goal of achieving numerous objectives. The primary goals of trials are validity and reliability. The pilot test attempts to collect data on the actual conditions of full-scale research, allowing researchers to anticipate and adjust to problems that may arise during full-scale research (Hastono, 2020). The validity of an instrument is defined as the amount to which it measures what it is designed to measure, whereas the reliability of a measure is defined as the extent to which a measuring instrument is error-free and constant throughout time as well as across different items on the scale (Nursalam, 2020). However, this paper gives the findings of a study that looks the psychological trauma level among post earthquake children.

Methodology

This research, sample sizes for trials are usually small, ranging from fifteen to thirty respondents. As a result, it is envisaged that with a valid and reliable instrument, measurement error can be greatly minimized. Cronbach's alpha coefficient is the most widely used inter-item consistency and reliability measure. As a result, Cronbach's alpha coefficient was utilized in this study to assess the instrument's internal consistency (Sugiyono, 2019). After the data was processed using SPSS version 24, all measuring instruments had high reliability criteria, ranging from 0.70 - 0.90. Based on the standard, an instrument with a coefficient of 0.60 is considered to have good reliability (Hastono, 2020).

Instrumentation of measurement of variables

In the pilot survey, a structured questionnaire consisting of likerts scales are used in some research, a five-point likerts

will yield the expected result. Questions was used because, in addition to being the most efficient and reliable tool for data collection, this tool was able to reduce ambiguity regarding questions and also gave respondents the freedom to express their output more efficiently. Furthermore, data analysis can be easily coded (Hastono, 2020).

INSTRUMENT THE CHILD PTSD SYMPTOM SCALE FOR DSM-V (CPSS-V SR)

A. Characteristics of the child

1. Respondent Number (Filled by Researcher) :
2. Children Name :
3. Children date of birth (required) :
4. Children Age :
5. Gender :
☐ Male ☐ Female

B. Instructions:

These questions ask about how you feel about the upsetting thing you wrote down. Read each question carefully. Then circle the number (0-4) that best describes how often that problem has bothered you IN LAST MONTH.

0 1 2 3 4
 Not at all Once a week 2 to 3 times a 4 to 5 times 6 or more times a
 or less/ a little week/ somewhat week/a lot week/almost always

Table 1.1 questionnaire the Child PTSD Symptom Scale for DSM-V (CPSS-V SR)

1. Having upsetting thoughts or pictures about it that came into your head when you didn't want them to	0	1	2	3	4
2. Having bad dreams or nightmares	0	1	2	3	4
3. Acting of feeling as if it was happening again (seeing or hearing something and feeling as if you are there again)	0	1	2	3	4
4. Feeling upset when you remember what happened (fo example, feeling scared, angry, sad, guilty, confused)	0	1	2	3	4
5. Having feelings in your body when you remember what happened (for example, sweating, heart beating fast, stomach or head hurting)	0	1	2	3	4
6. Trying not to think about it or have feelings about it	0	1	2	3	4
7. Trying to stay away from anything that reminds you of what happened (for example, people, places, or conversations about it)	0	1	2	3	4
8. Not being able to remember an important part of what happened	0	1	2	3	4
9. Having bad thoughts about yourself, other people, or the world (for example," I can't do anything right", "All people are bad", "The world is a scary place")	0	1	2	3	4
10. Thinking that what happened is your fault (for example, " i should have known better". "i shouldn't have done that", "i deserved it")	0	1	2	3	4
11. Having strong bad feelings (like fear, anger, guilt, or shame)	0	1	2	3	4
12. Having much less interest in doing things you used to do	0	1	2	3	4
13. Not feeling close to your friends or family or not wanting to be around them	0	1	2	3	4
14. Trouble having good feelings (like happiness or love) or trouble having	0	1	2	3	4

any feelings at all)					
15. Getting angry easily (for example, yelling, hitting others, throwing things)	0	1	2	3	4
16. Doing things that might hurt yourself (for example, taking drugs, drinking alcohol, running away, cutting your self)	0	1	2	3	4
17. Being very careful or on the lookout for danger (for example, checking to see who is around you and what is around you)	0	1	2	3	4
18. Being jumpy or easily scared (for example, when someone walks up behind you, when you hear a loud noise)	0	1	2	3	4
19. Having trouble paying attention (for example, losing track of a story on TV, forgetting what you read, unable to pay attention in class)	0	1	2	3	4
20. Having trouble falling or staying asleep	0	1	2	3	4

Reference: (The National Child Traumatic Stress Network, 2022).

Result and Discussion

Content and face validity

The Child PTSD Symptom Scale for DSM-5 (CPSS-5) is used to measure posttraumatic stress disorder diagnosis and severity in the past month in children aged eight to 18. It contains a trauma screening to assess history of Criterion A traumatic experiences in order to identify an index trauma as well as a 27-item semi-structured interview that includes 20 items assessing DSM-5 PTSD symptoms and seven items assessing impairment of endorsed symptoms on daily functioning. The CPSS-5 takes approximately 30 minutes to administer as an interview measure (by a clinician or a therapist; CPSS-5-I) and 10 minutes to complete as a self-report (CPSS-5-SR). Versions are available in English, Hebrew, Portuguese, Slovenian, Spanish, and Swedish (Edna B. Foa, 2013).

In this study validity of questionnaire Instrument The Child PTSD Symptom Scale For DSM-V (CPSS-V SR) done by 30 respondents. All validity result of 20 questionnaire. All validity test results reached a statistical significance level can see from corrected item-total correlation and will compare with r-table value is 0.361 with significance level 5%. The data as below:

Table 1.2 Validity test

Question	r-result	r-table	Result
Q1	0.565	0.361	Validity
Q2	0.524	0.361	Validity
Q3	0.421	0.361	Validity
Q4	0.814	0.361	Validity
Q5	0.558	0.361	Validity
Q6	0.524	0.361	Validity
Q7	0.555	0.361	Validity
Q8	0.514	0.361	Validity
Q9	0.469	0.361	Validity
Q10	0.483	0.361	Validity

Q11	0.649	0.361	Validity
Q12	0.401	0.361	Validity
Q13	0.437	0.361	Validity
Q14	0.558	0.361	Validity
Q15	0.460	0.361	Validity
Q16	0.548	0.361	Validity
Q17	0.398	0.361	Validity
Q18	0.505	0.361	Validity
Q19	0.574	0.361	Validity
Q20	0.520	0.361	Validity

Source: Processing data SPSS 24.

Reliability

Reliability is the consistency throughout a series of measurements (Cronbach). The reliability test is intended to test whether each respondent's answer reflects what the researcher wants or not. So that it can be used as a tool to obtain data from respondent. Reliability test results are used to determine whether the measuring instrument used is reliable. To find out the reliability is to compare r table with r result. If $r_{\alpha} > r_{\text{Cronbach}}$, so the question is reliability (Sugiyono, 2019).

Reliability can be thought of as consistency. Does the instrument consistently measure what it is intended to measure, it is not possible to calculate reliability. However, there are four general estimators that may encounter in reading research: the first inter-rater/observer reliability, the degree to which different raters/observers give consistent answers or estimates, the second test-retest reliability, the consistency of measure evaluated over time, the third parallel-forms reliability, the reliability of two test constructed the same way, from the same content, the fourth internal consistency reliability, the consistency of results across items, often measured with Cronbach's Alpha (Creswell, 2018).

According to Sugiono, (2019) the reliability test is the extend to which the measurement using the same object will produce the same data. The reliability test is conducted using the SPSS Program (Sugiyono, 2019). Using the Alpha Cronbach formula, the reliability test was conducted as follows:

Table 1.3 Validity test questionnaire Instrument The Child PTSD Symptom Scale For DSM-V (CPSS-VSR)

Question	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Result
Q1	22.07	89.375	0.480	0.852	Reliability
Q2	22.17	92.075	0.452	0.853	Reliability
Q3	21.57	94.806	0.351	0.856	Reliability
Q4	21.73	85.030	0.774	0.839	Reliability
Q5	21.70	89.528	0.473	0.852	Reliability
Q6	21.83	90.902	0.440	0.853	Reliability
Q7	21.70	90.769	0.479	0.852	Reliability
Q8	22.53	91.706	0.436	0.853	Reliability
Q9	22.17	92.833	0.389	0.855	Reliability
Q10	22.30	93.183	0.411	0.854	Reliability
Q11	21.67	91.471	0.601	0.848	Reliability
Q12	22.17	94.144	0.316	0.858	Reliability

Q13	22.77	95.495	0.380	0.856	Reliability
Q14	22.17	91.799	0.493	0.851	Reliability
Q15	22.27	92.892	0.378	0.856	Reliability
Q16	22.70	93.045	0.490	0.852	Reliability
Q17	21.33	95.678	0.335	0.857	Reliability
Q18	22.50	93.569	0.442	0.853	Reliability
Q19	21.70	88.631	0.485	0.852	Reliability
Q20	21.77	89.495	0.420	0.855	Reliability

Source: Processing data SPSS 24.

Conclusion

The Child PTSD Symptom Scale For DSM-V (CPSS-V SR) can be used to measure changes in PTSD symptoms and assess for childhood and adolescent PTSD diagnoses After conducting validity and reliability tests, the Child PTSD Symptom Scale for DSM-V (CPSS-V SR) instrument was proven to be valid and reliable for measuring psychological trauma in children post earthquake. The primary goal of this pilot study is to evaluate the measuring instrument's validity and reliability on a smaller scale before performing full-scale empirical research. After the main investigation is completed, the consequences of the constructs being measured will be known. Experts evaluated the measuring instrument's content and face validity, resulting in a revised instrument. The inter-item reliability test demonstrates that all items are reliable, with Cronbach's alpha greater than 0.80. Hence, no items questionnaire need to be deleted.

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Conflict of Interest

The authors state that they do not have any conflicts of interest.

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