

EVALUATING THE VALIDITY AND RELIABILITY OF A TRANSCULTURAL NURSING - BASED SPECIFIC AND SENSITIVE NUTRITIONAL INTERVENTION QUESTIONNAIRE TO ADDRESS STUNTING

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ABSTRACT

Stunting is a global health issue caused by chronic malnutrition that significantly impacts children's growth and development. Jember Regency has the highest stunting prevalence in East Java, reaching 34.9%, thus requiring effective solutions. Specific and sensitive nutritional interventions based on transcultural nursing are seen as crucial efforts in reducing stunting rates. However, a valid and reliable instrument is needed to assess the effectiveness of interventions at the family level. This study aims to develop and validate a specific and sensitive nutritional intervention questionnaire based on transcultural nursing as a tool to measure family awareness in preventing stunting in Jember Regency. This research involved 42 mothers of stunted children as respondents, residing within the working area of the Rambipuji Public Health Center. The instrument's validity was assessed using the Content Validity Index (CVI), while reliability was measured through Cronbach's alpha coefficient to ensure consistency. The questionnaire includes nine dimensions, such as Technology, Religion and Life Philosophy, Social and Family Support, Cultural Values and Lifestyle, Specific and Sensitive Nutritional Interventions. Content validity ranged from 0.80 to 1.00, and internal consistency measured by Cronbach's alpha showed values between 0.752 and 0.950. These results indicate that the questionnaire is effective in measuring family awareness and the effectiveness of nutritional interventions. This questionnaire is a valid and reliable instrument to support the optimization of sustainable stunting prevention programs in Jember Regency.

Keywords: Stunting; Nutritional Interventions; Transcultural Nursing.

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INTRODUCTION

Stunting is a global health problem caused by chronic malnutrition, often recurring in pregnant women and children. This condition significantly risks hindering children's growth and development and increases vulnerability to infectious diseases due to a weakened immune system (Rasni et al., 2019). The direct causes of stunting are related to inadequate

nutritional intake and the health status of both mothers and children, while indirect factors involve conditions outside the Ministry of Health's policies (Dewi, 2022). Data from 2020 showed that stunting affects nearly 149.2 million children worldwide (World Health Organization, 2022). According to the 2022 Indonesian Nutrition Status Survey (SSGI), the prevalence of stunting in Indonesia decreased from 24.4% in 2021 to 21.6% in 2022 (Ministry of Health, 2022). In East Java, the prevalence of stunting decreased by 4.3% from 23.5% in 2021, yet this figure still falls short of the national target of 14% by 2024 (Ministry of Health, 2022; Presidential Regulation 18/2020, 2020). Jember Regency recorded the highest prevalence in East Java at 34.9%, with approximately 35,000 stunted children, far from the national target (Ministry of Health, 2022; Presidential Regulation 18/2020, 2020; Zumrotun Solichah, 2023).

Reducing stunting prevalence is a global commitment to achieving the World Health Assembly's 2025 target of a 40 million children (World Health Organization, 2020). The National Strategy for Accelerating Stunting Reduction (Stranas Stunting) consists of five pillars: (1) commitment and leadership vision; (2) national campaigns and behavioral change communication; (3) convergence of central, regional, and village programs; (4) food and nutrition security; and (5) monitoring and evaluation (Presidential Regulation 72/2021, 2021). Emphasizing the third pillar, convergence of programs, requires coordination and synergy across sectors at various levels in a holistic and integrative approach through specific and sensitive nutritional interventions (Presidential Regulation 72/2021, 2021). Specific nutritional interventions focus on food intake, feeding practices, and infection management, while sensitive nutritional interventions aim to improve access to nutritious food, parenting awareness, healthcare services, and sanitation facilities (Dewi, 2022). Additionally, local culture plays a crucial role in the success of interventions, as traditions and habits can influence the community's acceptance of feeding practices and healthcare (Julianti & Elni, 2020).

Specific and sensitive nutritional interventions based on transcultural nursing are vital efforts to address stunting in Jember Regency. This requires a questionnaire that can assess the acceptance and effectiveness of interventions within the local cultural context. Cultural values, beliefs, and norms related to dietary patterns and maternal and child healthcare practices significantly affect nutritional status and the occurrence of stunting (Aulina Ginting et al., 2023). The lack of a valid culturally grounded instrument hinders healthcare providers from assessing and sustaining the impact of nutritional interventions while addressing transcultural dimensions in community nursing (Zanchetta, 2023). Validation of items and language on the questionnaire needs to be adapted to local cultures and norms so that the instrument is accepted by the local community and accurately reflects the real conditions (Gonzalo, 2023). This study aims to develop and validate a transcultural nursing-based specific and sensitive nutritional intervention questionnaire to address stunting in Jember Regency.

METHODS

Study Design

This study used a descriptive research design to develop and validate a transcultural nursing-based nutrition intervention instrument specifically tailored to address stunting. Quantitative methods were applied to ensure the comprehensive development and validation of the instrument.

Setting

The study was conducted in the working area of the Rambipuji Public Health Center, specifically in Kaliwining village, which had the highest cases of stunting. This area was selected based on its prevalence of stunting and the community's cultural diversity, which provided a suitable setting for developing and testing a culturally sensitive intervention instrument.

Research Subject

The respondents in this study were mothers with children aged 0-60 months experiencing stunting. In Kaliwining village, 43 children with stunting were identified.

$$n = \frac{N}{1 + N \cdot e^2}$$

Using the Slovin formula with a population size (N = 43), a confidence level of 95%, and an absolute margin of error (e = 0.05), the sample size was determined to be 42 mothers. Inclusion criteria included mothers with children aged 0-60 months and mothers residing within the health center's working area. Exclusion criteria included mothers who refused to participate, were illiterate, or had children with special needs or chronic diseases.

Instruments

The study developed a transcultural nursing-based specific and sensitive nutrition intervention questionnaire, guided by a conceptual framework and validated through qualitative methods. The instrument included 129 statements addressing sociodemographic factors and various dimensions such as technology, religion and life philosophy, social and family support, cultural values and lifestyle, politics and policy, education, economy, specific nutrition interventions, and sensitive nutrition interventions. Each statement was rated on a 4-point Likert scale: Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4). Reverse scoring was applied to unfavorable statements to ensure accurate response measurement. Content validation was conducted using the Content Validity Index (CVI), with a panel of experts consisting of two anthropologists, one pediatric nursing specialist, two community nursing specialists, and one nutrition expert. Reliability was assessed through internal consistency using Cronbach's α coefficient and a test-retest method.

Data Analysis

Data were analyzed using SPSS version 23.0. Descriptive statistics were used to identify participant characteristics. The CVI was calculated to validate the content of the questionnaire. Internal consistency reliability was measured using Cronbach's α coefficient, and test-retest reliability was conducted with significance set at $p < 0.05$. These analyses ensured the validity and reliability of the instrument.

Ethical Consideration

This study was approved by the Health Research Ethics Committee of the Faculty of Nursing, University of Jember, under approval number 383/UN25.1.14/KEPK/2024. All research procedures adhered to ethical guidelines to protect participant rights and uphold scientific standards. Informed consent was obtained from all participants after providing detailed explanations of the study objectives and procedures. Confidentiality and voluntary participation were strictly maintained throughout the research process.

RESULTS

Characteristics of Respondents

Table 1. Characteristics of Respondents Validity of the Specific and Sensitive Nutrition Intervention Questionnaire Based on Culturally-Sensitive Nursing to Address Stunting in Jember Regency (N=42)

No	Karakteristik	
1	Mothers age Md (P25-P75)	23 (21-28)
2	Mothers age at marriage Md (P25-P75)	21 (19-23)
3	Mothers age at the birth of their first child Md (P25-P75)	22 (20-24)
4	Mothers height Mean \pm SD	156 \pm 2,45
5	Ethnic f(%)	
	Madurese	22(51)
	Javanese	8 (19)
	Pandalungan	12 (30)

6	Religion <i>f</i> (%)	
	Muslim	39 (92)
	Christian	2 (5)
	Hindu	0 (0)
	Catholic	1 (3)
	Buddhist	0 (0)
7	Level of education <i>f</i> (%)	
	No Formal Education	3 (7)
	Elementary School	5 (12)
	Junior High School	16 (38)
	Senior High School	18 (42)
8	Occupation <i>f</i> (%)	
	Housewives	13 (31)
	Farmers/laborers	2 (5)
	Traders	7 (17)
	Entrepreneurs	20 (48)
9	Number of children owned <i>Md</i> (P25-P75)	2 (1-2)
10	Exclusive breastfeeding <i>f</i> (%)	
	Yes	23 (55)
	No	19 (45)
11	Chronic Energy Deficiency <i>f</i> (%)	
	Yes	2 (5)
	No	40 (95)

Of the total 42 respondents, the majority of mothers had a median age of 23 years, a median age at marriage of 21 years, and a median age at the birth of their first child of 22 years. The average height was 156 cm with a standard deviation of 2.45 cm. Most of the respondents were from the Javanese ethnic group (51%), followed by Pandalungan (30%) and Madurese (19%). The majority of the mothers were Muslim (92%), with the highest level of education being senior high school or equivalent (42%), junior high school or equivalent (38%), elementary school or equivalent (12%), and a small percentage had no formal education (7%). In terms of occupation, most of the mothers worked as entrepreneurs (48%), while others were housewives (31%), traders (17%), and farmers/laborers (5%). The median number of children owned by the mothers was 2. Additionally, 55% of the mothers provided exclusive breastfeeding, while 45% did not. Furthermore, 95% of the mothers did not have a history of Chronic Energy Deficiency (CED), while only 5% had a history of CED.

Item Analysis and Reliability

Table 2. Results of the Validity and Reliability Test of the Specific and Sensitive Nutrition Intervention Questionnaire Based on Culturally-Sensitive Nursing to Address Stunting in Jember Regency

Technology	CITC	CAID
Cronbach's $\alpha = 0,941$		
1. I find it easy to obtain information related to exclusive breastfeeding, nutritional supplements, and the management of sick toddlers through the internet.	0,731	0,936
2. I feel that I do not need to engage in online discussions (via internet platforms such as Facebook, YouTube, Google) about Family Planning (FP) and parenting for my child.	0,662	0,938
3. I am able to use the internet to search for information on the importance of clean water and sanitation in preventing stunting in toddlers.	0,770	0,934
4. I easily obtain information about toddler nutrition and the importance of immunization from the Mother and Child Health book (the pink book).	0,672	0,938
5. I use television only for entertainment and do not look for health education programs related to mothers and toddlers.	0,677	0,938
6. Television helps me obtain information on child development and stimulation to prevent stunting in toddlers.	0,836	0,938
7. I find it easy to visit the posyandu (integrated service post) and health center	0,686	0,937

to monitor my child's growth and development and obtain child nutrition information.		
8. The health center in my village/sub-district often runs out of stock of diarrhea medications and iron supplements, so I have to buy them at the pharmacy.	0,796	0,933
9. The health center provides counseling services on age-appropriate child-rearing and child development stimulation.	0,752	0,935
Religion and Life Philosophy Cronbach's $\alpha = 0,752$	CITC	CAID
1. I feel that giving colostrum (the thick and watery breast milk) after childbirth is not good for the baby, so it is better to give formula milk right from the start.	0,506	0,719
2. I believe that getting used to using clean water and healthy latrines will prevent diarrhea.	0,453	0,726
3. I believe that children with incomplete immunization are more vulnerable to illness and at risk of stunting.	0,394	0,734
4. I believe that when a child is sick, such as with diarrhea, it is God's will, and there is nothing I can do to prevent it.	0,477	0,723
5. Meat, chicken, eggs, and types of protein from fish are not good for mothers after childbirth because they will cause itching and the stitches will not heal, as said by my parents and in-laws who are more experienced than me.	0,410	0,732
6. I agree with and feel at ease breastfeeding my child until the age of two, in accordance with my religious teachings.	0,324	0,744
7. I believe that providing proper and loving attention in child-rearing will help the child grow healthy and intelligent, as taught by my religion.	0,119	0,770
8. I do not need to participate in the Family Planning program because I believe that each child will bring their own sustenance/fortune.	0,436	0,728
Social and Family Support Cronbach's $\alpha = 0.867$	CITC	CAID
1. My family supports me in exclusively breastfeeding without additional food or drinks for 6 months, as recommended by healthcare professionals.	0,571	0,856
2. My husband supports and allows me to participate in the family planning program; we discuss and decide together on which type of birth control to use.	0,564	0,856
3. I feel pressured when my family (husband/parents/in-laws/siblings) forbids me from giving immunizations because they believe it is harmful and will make the child fussy.	0,487	0,860
4. My family says that the parenting methods I follow, as advised by healthcare professionals, are not suitable and do not align with the traditional parenting methods.	0,563	0,857
5. I am praised by my family whenever my child's weight and height increase, which further motivates me to provide balanced nutrition.	0,493	0,860
6. I feel that the family planning program I have chosen is respected by those around me.	0,386	0,864
7. I feel that my family is indifferent or unconcerned when my child is sick, making me feel alone in taking care of my child.	0,126	0,874
8. I feel comfortable discussing my child's upbringing with healthcare professionals, and I receive a lot of positive feedback for my child's growth and development.	0,615	0,854
9. I receive clear and complete information from healthcare providers about the types of supplementary food to give in order to improve my child's nutrition.	0,411	0,863
10. My family advises me not to follow current parenting practices because they believe they do not align with traditional teachings.	0,571	0,856
11. My family advises me to eat more green vegetables while breastfeeding without meat, eggs, or fish because they believe it will prevent my breast milk from having a fishy taste.	0,564	0,858
12. My family is ready to take me to the posyandu (integrated service post) or health center when my child is sick or needs a health checkup.	0,563	0,857
13. I find it difficult to ask my husband/family for help if I want to attend counseling or health education sessions because they consider it	0,493	0,860

unimportant.		
14. My family helps me teach my child to wash their hands before eating and after using the bathroom to prevent diarrhea.	0,386	0,864
Cultural Values and Lifestyle	CITC	CAID
Cronbach's α =0,827		
1. I believe in cultural beliefs that if I frequently consume fish, my breast milk will smell and taste fishy; if I eat spicy food, my breast milk will taste spicy; and if I consume eggs, my breast milk will cause the baby to have rashes.	0,562	0,832
2. I believe that immunizing my child will keep them healthy and prevent stunting.	0,501	0,836
3. I believe that continuing to breastfeed my child until they are 2 years old, along with complementary foods, will make my child healthier.	0,554	0,833
4. I believe that participating actively in the family planning program is a woman's responsibility and that men do not need to be involved.	0,476	0,837
5. I trust parenting advice from my parents/in-laws because they are more experienced, even if it contradicts the recommendations of doctors/health professionals.	0,619	0,830
6. I believe that drinking traditional herbal medicine every day is better than the iron and calcium supplements provided by healthcare workers.	0,420	0,840
7. I avoid certain foods and drinks during pregnancy (catfish, shrimp, mung beans) because, according to my culture, they are harmful and could make the baby's body imperfect or smell fishy.	0,471	0,837
8. I regularly monitor my child's growth and development by visiting the posyandu (integrated service post) every month.	0,562	0,832
9. I do not give mashed bananas or rice to my child before they are 6 months old.	0,454	0,838
10. I give my child additional formula milk, even though I am already breastfeeding, to make my child fuller.	0,501	0,836
11. I do not eat pineapples during the early stages of pregnancy because, according to my culture, it can cause a miscarriage.	0,584	0,831
12. I give my child young coconut water before 6 months of age because it is believed to make the child healthy.	0,299	0,845
13. My family and I have the habit of washing hands before eating and after using the bathroom.	0,273	0,846
14. I was used to washing clothes and vegetables in the river because I considered the river to be a source of clean water.	0,501	0,836
15. I could easily find staple ingredients (flour, salt, cooking oil) around me and was accustomed to cooking with these ingredients.	0,584	0,831
Politics and Policy	CITC	CAID
Cronbach's α = 0,950		
1. I feel the benefits of the posyandu (integrated service post) for toddlers and pregnant women that is held every month by the health center to prevent stunting.	0,737	0,947
2. The policy of providing deworming medication has been implemented in my area and is beneficial for children's health and preventing stunting.	0,646	0,949
3. I feel the benefits of providing supplementary foods for babies and toddlers, as well as iron, vitamins, and calcium supplements for pregnant and breastfeeding mothers.	0,802	0,945
4. I feel the benefits of monitoring and measuring the growth and development of toddlers (weight and height/length measurements) that is done every month by the health center with the posyandu program in my area.	0,811	0,945
5. I feel that the PROKASIH (Clean River Program) is not being well implemented because there are no serious sanctions for people who dispose of waste in the river.	0,732	0,947
6. Parenting counseling and child-rearing classes for parents to improve children's growth and development have been regularly held in my area.	0,664	0,949
7. The health center officers and cadres in my area are very active in encouraging all toddlers to get immunized.	0,679	0,948
8. Community leaders and cadres in my area do not prohibit avoiding certain foods during pregnancy and breastfeeding.	0,789	0,946

9. The establishment of J-PK (Jember Pasti Keren) makes me not worry about seeking treatment when my child is sick because the treatment is free of charge.	0,701	0,948
10. The policy regarding the prohibition of early marriage in my area is not well implemented because there are still girls getting married before the age of 16 or after graduating from junior high school.	0,752	0,947
11. The introduction of local food products (corn, tubers, bananas) and staple foods (cooking oil, salt, flour) to prevent stunting has been carried out in my area	0,732	0,947
Education	CITC	CAID
Cronbach's $\alpha = 0,794$		
1. Stunting (short stature) or height less than the age can make a child more susceptible to diseases, and the child's growth and development may not be optimal.	0,700	0,742
2. The provision of supplementary food (PMT) starts at 6 months of age and is beneficial for improving nutrition and preventing stunting.	0,584	0,762
3. Iron and vitamin supplements for pregnant women are considered additional food and are merely recommendations from healthcare workers.	0,606	0,760
4. Pregnant women with HIV/AIDS are at risk of giving birth to babies with stunting (short stature) that does not match their age.	0,592	0,759
5. Deworming medication is given every 3 months starting from the age of 6 months.	0,542	0,767
6. The use of local food ingredients (local food sources such as corn, cassava, sweet potatoes, and taro) as a substitute for rice can improve a child's nutrition.	0,627	0,756
7. Washing hands before eating and drinking boiled water until it boils helps prevent diarrhea.	0,503	0,772
8. I do not understand how parenting patterns can affect a child's nutrition and contribute to stunting.	0,174	0,805
9. The labels (white boxes) on flour, salt, cooking oil, or other food products help me understand nutritional information.	0,573	0,765
Economy	CITC	CAID
Cronbach's $\alpha = 0,798$		
1. I feel that my family's income is currently sufficient to meet daily needs, especially to provide good nutrition for my child.	0,807	0,712
2. My family's income at the moment makes it difficult for me to provide additional vitamin and mineral supplements needed to prevent stunting.	0,830	0,702
3. My family's economic situation makes me feel confident/not worried about taking care of my child, especially when my child is sick.	0,401	0,796
4. My family has health insurance (BPJS, Askes) that helps with healthcare services.	0,319	0,804
5. My family's current economic situation makes it difficult for me to provide clean water storage and healthy latrines at home.	0,646	0,749
6. My family's limited income makes it difficult for me to independently attend parenting education.	0,420	0,790
Specific Nutrition Interventions	CITC	CAID
Cronbach's $\alpha = 0,774$		
1. I regularly consume supplementary food (PMT) during my pregnancy.	0,448	0,759
2. I regularly take iron supplements during pregnancy.	0,486	0,759
3. I do not regularly attend consultations and breastfeeding classes held at the posyandu and puskesmas during the breastfeeding period.	0,242	0,770
4. I diligently attend counseling on how to provide supplementary food to my baby during breastfeeding.	0,364	0,763
5. I follow the recommendations from healthcare professionals regarding the steps to improve my baby's nutrition during breastfeeding.	0,591	0,750
6. I do not give supplementary food (PMT) from the posyandu/puskesmas because the portion is not sufficient to improve my baby's nutrition.	0,176	0,786
7. I regularly monitor my baby's weight and height/length and always attend counseling on the importance of child growth.	0,406	0,762
8. I regularly take iron supplements since I started menstruating.	0,236	0,773

9.	I follow the advice given by healthcare professionals on how to improve my toddler's nutrition, which has resulted in an increase in my child's weight and height.	0,514	0,757
10.	I have seen growth improvement in my toddler since receiving the supplementary food (PMT) program.	0,558	0,750
11.	My toddler has not shown the expected weight gain despite being regularly monitored at the posyandu.	0,206	0,772
12.	I regularly take calcium supplements during pregnancy.	0,482	0,758
13.	I regularly have prenatal check-ups at the posyandu/puskesmas/with a midwife/doctor.	0,435	0,760
14.	I do not give vitamin A capsules to my baby during breastfeeding because breast milk alone is sufficient.	0,103	0,787
15.	I do not take additional vitamin and mineral supplements because I am concerned that they will affect the quality of the breast milk I give to my baby.	0,494	0,761
16.	I continue to immunize my baby during breastfeeding because breast milk alone is not enough to prevent diseases in my baby.	0,561	0,750
17.	I give zinc supplements to my baby when they have diarrhea and continue breastfeeding.	0,421	0,759
18.	I follow the advice from healthcare professionals when my baby is sick and remain calm while breastfeeding.	0,700	0,741
19.	I have not seen a significant change in my toddler's growth despite giving vitamin A supplements.	0,192	0,772
20.	I do not give multivitamin and mineral supplements (taburia) because they do not have an impact on my toddler's growth.	0,325	0,801
21.	I always give zinc supplements when my toddler has diarrhea and provide first aid by making oral rehydration solution.	0,077	0,783
22.	I follow the advice of the midwife/healthcare professionals when my toddler is sick, such as using warm compresses if my child has a fever.	0,033	0,788
23.	I did not undergo HIV screening during pregnancy and only did it when I was about to give birth.	0,299	0,767
24.	I give deworming medication to my child starting at one year old while still breastfeeding.	0,380	0,763
25.	I continue giving deworming medication to my toddler every six months, even though my child has already received deworming medication at one year old.	0,342	0,765
Sensitive Nutrition Interventions		CITC	CAID
Cronbach's α =0,795			
1.	My family uses safe clean water for bathing and washing, and we drink water that has been boiled until it reaches a rolling boil.	0,335	0,788
2.	My family defecates in the river.	0,153	0,797
3.	I am not using any family planning method at the moment (birth control pills/ injections/ condoms/ IUD/ calendar method/ implants/ withdrawal method).	0,166	0,796
4.	My family has permanent health insurance (BPJS/ other health insurance) in addition to the J-PK program (Jember Pasti Keren, free treatment for Jember residents).	0,387	0,785
5.	My family receives cash assistance from the Family Hope Program (PKH).	0,705	0,754
6.	I do not use the television/phone or the internet to search for information about my child's nutritional needs.	0,527	0,773
7.	I am not willing to attend counseling to change my habit of feeding my child because I know best what my child's nutritional needs are.	0,543	0,772
8.	I always routinely discuss with healthcare providers about the best way to raise my child.	0,418	0,782
9.	I believe Early Childhood Education (PAUD) is important for my child, and I will enroll my child in PAUD at the appropriate age.	0,357	0,788
10.	Adolescents in my family do not receive reproductive health counseling.	0,259	0,793
11.	I actively participate in the Dasawisma/PKK program in my community.	0,664	0,761
12.	My family receives non-cash food assistance (BPNT) such as rice/eggs/other food items.	0,534	0,771
13.	I commonly use distilled cooking oil (kletik oil) sold at the market.	0,262	0,794

14. I grow vegetables (tomatoes, chili, cucumber), tubers, corn, or other food crops in my yard or using small pots (polybags).	0,114	0,807
15. I always read the label (white box, nutritional information) on food products before purchasing them.	0,610	0,774

CITC: Corrected Item-Total Correlation

CAID: Cronbach's Alpha if Item Deleted

From the reliability analysis, it was found that the transcultural nursing-based specific and sensitive nutrition intervention questionnaire demonstrated good internal consistency (Table 2). The Cronbach's α values for each main dimension were as follows: 1) Technology (0.941), 2) Religion and Life Philosophy (0.752), 3) Social and Family Support (0.867), 4) Cultural Values and Lifestyle (0.827), 5) Politics and Policy (0.950), 6) Education (0.794), 7) Economy (0.789), 8) Specific Nutrition Interventions (0.774), and 9) Sensitive Nutrition Interventions (0.795). The overall Cronbach's α values ranged from 0.752 to 0.950, indicating that this questionnaire is highly valid and reliable as a measurement tool.

Content Validity

The researcher used the Content Validity Index (CVI) method to determine the validity of the items. Six experts were involved in this process, consisting of 2 anthropologists, 1 pediatric nursing specialist, 2 community nursing specialists, and 1 nutrition expert. These experts evaluated 129 items of a culturally-sensitive, nursing-based specific and sensitive nutrition intervention questionnaire based on the relevance and clarity of the items in measuring family nutritional awareness related to fulfilling nutrition for stunting prevention. The assessment was done using a four-point Likert scale, where a score of 1 indicates not relevant, 2 means somewhat relevant, 3 is quite relevant, and 4 is very relevant. The CVI score was calculated as the proportion of experts who rated the item as 3 or 4, divided by the total number of experts. The CVI for the questionnaire items ranged from 80% to 100%, indicating adequate content validity and suitability for the purpose of this research (Kipli & Khairani, 2020).

DISCUSSION

This study examined the validity of a transcultural nursing-based questionnaire for specific and sensitive nutritional interventions designed to assess family awareness in preventing stunting. The results showed that the questionnaire had an adequate Content Validity Index (CVI), ranging from 0.80 to 1.00, which indicated high relevance and agreement among experts. Internal consistency reliability was also strong, with a Cronbach's α value of 0.835. These findings highlighted the robustness of the questionnaire in capturing multidimensional aspects of family awareness and cultural sensitivity in stunting prevention.

Nutritional issues generally affected children aged 0-5 years, a critical period for rapid growth and development (Zumrotun Solichah, 2023). Nutritional problems during this period often resulted in permanent deficits, even if nutritional needs were met later, as seen in stunting cases (Kemenkes RI, 2022). Stunting was characterized by a child's height being shorter than expected for their age (Kemenkes RI, 2022; Perpres 18/2020, 2020). According to global data, stunting affected 149.2 million children under five worldwide in 2020 (WHO, 2022). The prevalence of stunting was influenced by various factors, including malnutrition during the first 1,000 days of life, poor sanitation and hygiene (Aramico, 2020), genetic predisposition, family child-rearing practices, and low nutritional awareness (Julianti & Elni, 2020; Ramadhani et al., 2023). In Jember District, where stunting prevalence was high at 34.9%, targeted nutritional interventions were necessary to strengthen family awareness and improve access to nutritious food (Kemenkes RI, 2022; Perpres 18/2020, 2020).

The stunting issue in Jember reflected a complexity involving not only nutritional deficiencies but also cultural factors influencing family child-rearing practices and health behaviors. Local beliefs about certain foods, feeding practices, and maternal healthcare traditions significantly

impacted children's nutritional status (Julianti & Elni, 2020). Furthermore, family structures, including the involvement of grandparents in child-rearing, were prominent in rural agricultural areas and played a role in stunting prevalence (Ramadhani et al., 2023; Susanto et al., 2021). Social support and cultural values were critical in determining the acceptance of nutritional interventions, particularly in implementing specific and sensitive nutrition strategies (Cahyani et al., 2019). For instance, local practices like "masak abereng" effectively improved toddler weight, while traditions such as "bu'a oring" enhanced community participation in stunting prevention programs (Rasni et al., 2019; Lamawuran et al., 2023). Therefore, a culturally sensitive approach using transcultural nursing was essential for addressing stunting in Jember, which integrated Javanese and Madurese cultural influences (Arrovia, 2021).

The transcultural nursing-based specific and sensitive nutritional intervention questionnaire was a multidimensional tool that evaluated nine dimensions: 1) Technology, 2) Religion and Philosophy of Life, 3) Social and Family Support, 4) Cultural Values and Lifestyle, 5) Politics and Policy, 6) Education, 7) Economy, 8) Specific Nutritional Interventions, and 9) Sensitive Nutritional Interventions. Each dimension captured aspects of family understanding and acceptance of nutritional intervention programs within a cultural context. This questionnaire emphasized the importance of understanding cultural influences on child-rearing, feeding habits, and health service utilization (Julianti & Elni, 2020). Transcultural nursing approaches were vital as health and nutrition practices in communities were deeply shaped by local customs, norms, and values (Ramadhani et al., 2023). Moreover, the support of extended families, particularly grandparents, played a significant role in adopting nutritional interventions in rural areas (Susanto et al., 2021).

Despite efforts, the implementation of specific and sensitive nutritional interventions remained suboptimal (Susanto et al., 2021). Addressing stunting required comprehensive and culturally targeted solutions. This study aimed to develop and validate a transcultural nursing-based specific and sensitive nutritional intervention questionnaire to measure family awareness and acceptance of stunting prevention initiatives. Engaging families in these interventions was critical for accelerating the fulfillment of nutritional needs in stunted toddlers. Thus, the development of this questionnaire provided a robust foundation for optimizing sustainable nutritional intervention programs that aligned with local sociocultural conditions and contributed to reducing stunting prevalence effectively.

CONCLUSION

The transcultural nursing-based specific and sensitive nutritional intervention questionnaire has been proven to be a valid and reliable tool for measuring family awareness and acceptance of stunting prevention efforts in Jember District. The content validity results (CVI ranging from 0.80 to 1.00) and internal consistency (ranging from 0.752 to 0.950) demonstrate the robustness of the instrument. Active family participation is crucial in accelerating the fulfillment of nutritional needs for stunted toddlers. This transcultural approach ensures that nutritional interventions are both accepted and effective. Therefore, the development of this questionnaire is expected to support sustainable stunting intervention programs and contribute to achieving the target reduction in stunting prevalence in Jember, in line with national health development goals.

SUGGESTIONS

The validated transcultural nursing-based questionnaire is an effective tool for assessing family awareness and designing culturally sensitive interventions to prevent stunting. It is recommended to integrate the questionnaire into public health programs, education, and policy while conducting further research to evaluate its long-term impact and refine its application.

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DECLARATION OF INTEREST

The authors declare that there is no conflict of interest

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