The Effect of the Nursing Care Model Based on Culture to Improve the Care of Malnourished Madurese Children in Indonesia

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The Effect of the Nursing Care Model Based on Culture to Improve the Care of Malnourished Madurese Children in Indonesia

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Abstract

AIM: The purpose of this study is to analyse the usage of nursing care model based on culture to improve parenting practices related to malnutrition among Madurese children.

METHODS: This study uses a quasi-experimental design and a purposive sample of 102 respondents from families with toddlers who suffered from nutritional deficiency. The sample consisted of an intervention group (n = 51) and a control group (n = 51). Data were collected using a questionnaire and weight measurement.

RESULTS: A t-test found a difference between all of the variables of care, including health technology utilization, when comparing the following variables between the intervention group and the control group (t = 14.12, p < 0.001), beliefs and philosophy (t = 10.20, p < 0.001), cultural values and lifestyle (t = 13.63, p < 0.001), economic reasons (t = 0.20, p = 0.837), nursing action response based on culture (t = 11.28, p < 0.001), and care behaviors children (t = 16.43, p < 0.001). The Wilcoxon signed-rank test found a difference between pre-intervention nursing care model based on culture and post-intervention nursing care model based on culture regarding the variable malnutrition status (t = 16.43, p < 0.001).

CONCLUSION: This study found that the application of nursing care model based on culture affects care practices. Nursing care model based on culture can be applied to families with toddlers who are malnourished because of the lack of a culture of care.

Introduction

The incidence of malnutrition and poor nutrition in Indonesia is based on research into basic health with indicators of weight for age (W/A) and stands at 18.4%. This is a high incidence compared to other Southeast Asian countries. The Madurese are members of a tribe in Indonesia spread over four districts. One is Sumenep, which has an 8.6% incidence of overall malnutrition and a 20.9% malnutrition rate among children.

The incidence is high because the Madurese are a patriarchal society in which women do not have significant positions which can be seen from the weak bargaining position of women relative to men. Consequently, women do not have access to health care even when they are pregnant or postpartum. The Madurese trust the dukun (traditional medicine) more than the health care workers. They trust the shaman and the advice of parents or elders. Moreover, most Madurese still live with their relatives (especially parents), so treatment decisions depend on parents or relatives. The Madurese culture prohibits foods derived from animal sources (eggs and fish) and vegetables (pineapple and eggplant) during pregnancy. These restrictions have a

negative impact on infant growth and the nutritional status of children [1].

Also, it is the culture of the Madurese mothers to feed bananas mixed with rice to babies at the age of one week [2]. It is assumed that if a child starves, they were not given bananas mixed with rice. To make it worse, it is the culture of the Madurese that when a child is sick, the mother takes medicine. Finally, the Madurese would feed the husband rather than the children because the husband is considered the breadwinner [3]. These problems are also prevalent in Cameroon where the incidence of infant malnutrition is also due to sociocultural factors, among others, improper feeding, lack of the mother's knowledge, lack of access and the distribution of health services [4]. These problems have also been prevalent in Iran among children aged 0-4 years who were found to have nutritional problems due to the mother's education, behaviour and parenting practices [5]. Kenya also has a similar problem with the cultural influence on feeding practices among children under the age of four [6]. Benin also has the same problem where there is a relationship between ethnicity and malnutrition among children [7].

To solve the problems above, we may turn to the application of nursing care models based on culture (transcultural nursing). This model is a form of humanistic nursing care focusing on the behaviour of individuals and groups as well as the process involved in maintaining or improving the behavior of health or alleviating pain both physically and psychoculturally according to the cultural background.

The implementation of transcultural nursing applies nursing interventions through three strategies: to retain, restructure, and negotiate. Transcultural nursing in Indonesia has not been implemented based on the local cultures; in particular, addressing the problem of malnutrition is necessary due to the culture of parenting that does not improve health. The purpose of this study is to describe the influence of nursing care model based on culture in improving malnutrition parenting practices for Madurese children.

Methods

Study design

The study used a quasi-experimental study to examine the effects of the Nursing Care Model based on Culture to Improve the Care of Malnourished Madurese Children (utilization of health care technology, beliefs and philosophies, cultural values and lifestyles, economic reasons, nursing response

based on culture, child care behavior, and malnutrition status) in Indonesia

Setting and sample

This is a quasi-experimental study. The research sample consisted of 102 families of which there are 52 families in the treatment group (Group A) and 50 families in the control group (Group B). The malnourished children were located using the community health centre medical database. The children were selected based on inclusion criteria such as Madurese ethnicity, under the age of 5 and supportive family which can correspond in Bahasa Indonesia (writing and reading). The data on malnourished children were obtained from five community health centres in Sumenep district. The children were divided into control and treatment groups based on the data obtained. The sample inclusion criteria were families with children with poor nutrition.

Instruments

The transcultural nursing result was measured through a questionnaire regarding child care practices with cultural approaches consisting of the utilisation of medical technology, beliefs and philosophies of health, family and societal dependency, cultural values, caring styles, economic aspects and responses to transcultural and caring practices. The average score was measured.

The research instrument was composed of 50 questions using a Likert scale with the following responses: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = always.

Procedure and Data collection

This study used a purposive sampling technique. The data were obtained from questionnaires of child care practice with cultural approaches consisting of the utilisation of medical technology, beliefs and philosophies of health, family, societal dependency, cultural values, caring style, economic aspects and responses to transcultural and caring practices. The respondents provided informed consent before the study. This study was conducted over six months in 2016 at a community health centre in Sumenep district, East Java province, Indonesia.

The intervention group received the stages of the nursing care model based on culture (transcultural nursing) for two months. The subsequent stages were as follows: (1) the stage of nursing assessment based on culture was conducted for 60 minutes with the collection and identification of cultural issues related to health problems; (2) the preparation phase of the action plans, goals and

criteria results was carried out for 60 minutes and established the plans, objectives and outcomes of actions to be implemented; (3) reinforcing the idea that the culture does not conflict with the treatment of malnutrition; (4) cultivating cultural negotiation in the treatment of malnutrition; and (5) fostering cultural restructuring in the treatment of malnutrition if the culture of care is against the principles of health. Transcultural nursing is a care method that includes cultural approaches such as the cultural strengthening of nursing values unrelated to malnutrition, negotiation of nursing culture to overcome malnutrition and the restructuring of malnutrition handling culture that is not in line with medical service principals [8].

Data analysis

All of the data were loaded into the Statistical Package for the Social Sciences (SPSS) version 19 and analysed using statistical methods. Statistical analysis used a t-test for data with normal distribution and the Mann-Whitney test for non-normal data distribution. The questionnaire's validity and reliability were tested with Cronbach alpha (0.83).

Ethical consideration

This study was approved by the Human Research Protections Program, Institutional Review Board, M University of Surabaya, No. 004071017.

Results

Demographic characteristics

Table 1 shows the characteristics of the mothers and their malnourished children.

Table 1: Sample Characteristics

Variables	Intervention group (N = 51) (n, %)		Control group (N = 51) (n, %)		Test of group differences
Mother's age					$\chi^2 = 1.921$ $p = 0.860$
< 20 years	3	(5.9)	1	(2.0)	
21-25 years	16	(31.4)	18	(35.3)	
26-30 years	8	(15.7)	9	(17.6)	
31-35 years	16	(31.4)	14	(27.5)	
36-40 years	5	(9.8)	4	(7.8)	
> 40 years	3	(5.9)	5	(9.8)	
Mother's education					$\chi^2 = 1.765$ $p = 0.623$
Never attended school	1	(2.0)	3	(5.9)	
Did not complete primary school	12	(23.5)	9	(17.6)	
Primary school	25	(49.0)	28	(54.9)	
Junior high school	13	(25.5)	11	(21.6)	
Senior high school	0	(0.0)	0	(0.0)	
University	0	(0.0)	0	(0.0)	
Mother's job					$\chi^2 = 3.076$ $p = 0.380$
Unemployed/homemaker	1	(2.0)	4	(7.8)	
Farmer	33	(64.7)	30	(58.8)	
Farmworker	14	(27.5)	16	(31.4)	
Government servant	3	(5.9)	1	(2.0)	
Child's gender					$\chi^2 = 0.056$ $p = 0.813$
Male	11	(21.6)	12	(23.5)	
Female	40	(78.4)	39	(76.5)	
Child's age					$\chi^2 = 0.065$ $p = 0.799$
0-1 months	0	(0.0)	0	(0.0)	
< 2-6 months	0	(0.0)	0	(0.0)	
< 7-12 months	9	(17.6)	10	(19.6)	
> 12 months	42	(82.4)	41	(80.4)	

The mothers were mostly between 21 and 25

years old (33.3%), while some of them were less than 20 years old (4.20%). Some of them received primary school education (45.0%), but a percentage of them had never attended school (4.20%). The mothers worked mostly as farmers (54.0%), and some of them were civil servants (4.0%). Most of the malnourished children were girls (79.2%), and they were more than one year old (83.3%). Some of them were between 7-12 months (16.7%).

Impact of the nursing care model base on cultural to budaya perawatan

Table 2 shows that after the two-month culture-based nursing intervention showed that the nursing care model based on culture had a statistically significant influence in increasing the utilisation of health care technology, compared to the control group (t = 14.12, p < 0.001). Participants felt that the belief of child care by utilising local culture would succeed after the intervention compared to the control group (t = 10.20, p < 0.001). Cultural values and manifestations improved after intervention compared to the control group (t = 13.63, p < 0.001). For economic reasons, there was no significant influence between the intervention group and the control group in improving child care (t = 0.20, p = 0.837). Participants also showed good nursing response based on culture after intervention compared to the control group (t = 11.28, p < 0.001). For child care behaviour experiencing positive behavioural enhancement, statistically, there was a significant difference between the intervention group and the control group (t = 16.43, p < 0.001).

Table 2: Comparison of Pre-Test and Post-Test Scores on the Culture-Based Health Care Variables of Children Between the Intervention and Control Groups

Culture-based health care variables	Pre-intervention			Post-intervention		
	Mean ± SD	t	p	Mean ± SD	t	p
Utilization of health care technology						
Intervention group (n = 51)	13.84 ± 6.24	1.36	0.175	29.53 ± 6.53	14.12	< 0.001
Control group (n = 51)	12.24 ± 5.62			12.49 ± 5.61		
Beliefs and philosophies						
Intervention group (n = 51)	16.27 ± 5.69	0.89	0.375	27.92 ± 5.39	10.20	< 0.001
Control group (n = 51)	15.33 ± 4.94			16.71 ± 5.69		
Cultural values and lifestyles						
Intervention group (n = 51)	16.27 ± 5.69	0.43	0.668	32.27 ± 5.69	13.63	< 0.001
Control group (n = 51)	15.80 ± 5.35			16.80 ± 5.76		
Economic reasons						
Intervention group (n = 51)	15.80 ± 5.35	0.06	0.864	31.80 ± 5.35	0.20	0.837
Control group (n = 51)	16.00 ± 6.14			16.04 ± 6.12		
Nursing response based on culture						
Intervention group (n = 51)	16.00 ± 6.14	0.43	0.109	31.69 ± 6.13	11.28	< 0.001
Control group (n = 51)	17.84 ± 5.34			18.67 ± 5.49		
Child care behavior						
Intervention group (n = 51)	17.84 ± 5.34	0.15	0.057	33.84 ± 5.34	16.42	< 0.001
Control group (n = 51)	15.80 ± 5.35			16.27 ± 5.45		

Impact of the nursing care model based on cultural to malnutrition status

Table 3 shows that the two-month culture-based nursing intervention showed statistically significant differences in malnutrition status between

the intervention group and the control group (t = 16.43, $p < 0.001$). Data shows that in the intervention group there is a change in malnutrition status. Before the intervention, there was no respondent with normal nutrition status. However, after the intervention there were 39 respondents (76.5%) who were malnourished became normal. Thus, the percentage of respondents with mild malnutrition decreased from (60.8%) to (11.8%) while those with moderate malnutrition decreased from (37.3%) to (9.8%). This is different in the control group where there was no significant change in the number of respondents with mild malnutrition and moderate malnutrition status.

Table 3: Comparison of Nutritional Status Before and After Intervention in the Intervention Group (n = 51) and the Control Group (n = 51)

Malnutrition status	Intervention group				Control group			
	Pre-intervention		Post-intervention		Pre-intervention		Post-intervention	
	n	%	n	%	n	%	n	%
Normal	0	0.0	39	76.5	0	0.0	2	3.9
Mild malnutrition	31	60.8	6	11.8	29	56.9	29	56.9
Moderate malnutrition	19	37.3	5	9.8	21	41.2	19	37.3
Severe malnutrition	1	2.0	1	2.0	1	2.0	1	2.0

Wilcoxon signed-rank test $p < .001$; Wilcoxon signed-rank test $p = .697$.

Discussion

All of the variables in the post-test, after application of the nursing model for three months, differed between the intervention group and the control group. Consequently, we concluded that the nursing model could improve parenting practices among Madurese mothers concerning nutrition. The results show that the transcultural nursing strategy can be used as an alternative to managing malnutrition among Madurese children. This was proven by the t-test values of all of the variables ($p < 0.05$). This suggests that the care culture factor is a health issue in the community that must be addressed especially among children in rural areas. Culture-based nursing care (transcultural nursing) can encourage families to change aspects of their culture that are unhealthy.

Leininger stated that transcultural nursing could be used in three ways: it can (1) maintain a positive culture, (2) conduct negotiations or accommodate the culture if the culture does not conflict with health care, and (3) restructure the culture if the culture causes health problems [9], [10]. In the context of Madurese children with malnutrition, all three approaches are applicable. We can maintain the family commitment to the child and encourage the family to continue using health care centre facilities and health posts held by clinic nurses. Cultural negotiations can be carried out by approaching the village leaders, clerics and villagers and offering

health cadres in the form of meetings and health education [11], [12], [13].

Approaching clerics is a priority because the Madurese respect them very much. Cultural restructuring can be accomplished through empowerment programs for families and community by engaging in various social activities, educational opportunities and training activities for mothers who have children with malnutrition [14].

Also, family behaviours concerning health care are inherited from generation to generation. Habits that are "normal" can be changed if they are unhealthy. In this context, transcultural nursing can play a critical role in challenging pre-existing beliefs and encouraging positive parenting behaviour [15], [16], [17].

Several variables in this study changed, including the use of health care technology. Post-treatment intervention-based culture changed certain aspects of respondents' perceptions of the use of technology to overcome current health problems, search for health assistance, the perception of sickness, treatment habits or coping health problems, among others. Trust and confidence after post-treatment intervention-based culture also changed. This is a belief system that includes human beliefs and images regarding the nature of God or that are considered God and regarding the supernatural. Religion influences the way a person strives to prevent disease and plays a strong role in rituals related to preventive health care. Religion outlines moral, social and dietary practices designed to keep adherents healthy and in a balanced state. Religion also plays an important role in the perception of disease prevention in its adherents. For example, for the majority of Muslims in the Madurese tribe, one of the alternatives to treatment is prayer [18]. Praying contains deep psychotherapeutic elements. Psychoreligious therapy is no less important than psychotherapy and psychiatry because praying contains spiritual powers that generate confidence and feelings of optimism (hope of healing). Self-confidence and optimism are essential for healing a disease or illness in addition to drugs and medical treatment

Changes in culture, values and lifestyles post-intervention are necessary because values are abstract concepts regarding ideas that are considered good or bad. Cultural values that are considered good and bad are formulated and defined by a culture's adherents. These changes can improve human health via culture-based care. Several views related to transcultural nursing occurred in malnourished Madurese children, especially regarding cultural care preservation or maintenance. These include breastfeeding babies and the prohibition on taking infants outside for 40 days after birth. Cultural care accommodation or negotiation also includes less than 2 years of breastfeeding, and regarding cultural care

re-patterning or restructuring, feeding newborns with honey, formula and bananas and discarding the first milk [9].

Cultural care from Leininger's perspective on the health of children (aged 0-2 years) can provide an action plan for cultural care maintenance or preservation, including the habit of breastfeeding a baby and give formula milk, and culture related to the prohibition on taking infants outside for 40 days after birth. Breastfeeding for less than 2 years can be considered a cultural care accommodation or negotiation action plan. Regarding feeding newborns with honey, formula and bananas and discarding the first milk, postpartum/breastfeeding mothers are subjected to cultural care re-patterning or restructuring because these actions are considered detrimental to infant health [17], [19].

Cultural care is the cognitive ability to know the values, beliefs, and expression patterns that guide, support, or provide opportunities for other individuals or groups to maintain their health and improve their living conditions [20]. The purpose of transcultural nursing is to bridge the care system using by the general public with professional care through nursing care.

Thus, in transcultural nursing, nurses must be able to make nursing decisions and action plans by focusing on three principles, among them cultural care preservation or maintenance, namely the principle of helping, facilitating, or focusing on cultural phenomena to enable individuals to determine their desired lifestyle and level of health [20]. Cultural care accommodation or negotiation, namely the principles of negotiation, support, assistance or focus on cultural phenomena that reflect ways to adapt, allow creative professional action and decisions to assist clients from the culture designated to negotiate or consider health and lifestyle conditions, and cultural care repatterning or restructuring, which is the principle of reconstructing or changing to improve the health conditions and lifestyles of clients [20]. Cultural restructuring is carried out if the culture is detrimental to health status [21].

In conclusion, the nursing care model based on culture is a model-based approach to culture that plays an important role in overcoming child health problems in the community, especially when cultural factors are conflicting with healthy principles. This approach can be used in developing countries where there are many isolated regions with few accessible health care facilities and workers. Transcultural nursing can reduce infant morbidity due to malnutrition, especially among populations who maintain a local culture that is conflicting with healthy principles. Even a three-months program can make a significant difference.

References

1. Barroso MM, Salvador LM, Fagundes Neto U. Severe protein-calorie malnutrition in two brothers due to abuse by starvation. Rev Paul Pediatr. 2016; 34(4):522-7. PMid:27452429 PMCid:PMC5176076

2. Ahmad B, Anam N, Khalid N, Mohsen R, Zaal L, Jadidy E, et al. Perceptions of women of reproductive age about vitamin and folic acid supplements during pregnancy, Taibah University, Almadinah Almunawwarah, Kingdom of Saudi Arabia. Journal of Taibah University Medical Sciences. 2013; 8(3):199-204. https://doi.org/10.1016/j.jtumed.2013.08.002

3. Hanafi MI, Hamid Shalaby SA, Falatah N, El-Ammari H. Impact of health education on knowledge of, attitude to and practice of breastfeeding among women attending primary health care centres in Almadinah Almunawwarah, Kingdom of Saudi Arabia: Controlled pre-post study. Journal of Taibah University Medical Sciences. 2014; 9(3):187-93. https://doi.org/10.1016/j.jtumed.2013.11.011

4. Pemunta NV, Fubah MA. Socio-cultural determinants of infant malnutrition in Cameroon. J Biosoc Sci. 2015; 47(4):423-48. https://doi.org/10.1017/S0021932014000145 PMid:24717356

5. Noughani F, Bagheri M, Ramim T. Nutritional habits of mothers and children in the age group 0-4 years in Iran. Ecol Food Nutr. 2014; 53(4):410-8. https://doi.org/10.1080/03670244.2013.824434 PMid:24884555

6. Chege PM, Kimiywe JO, Ndungu ZW. Influence of culture on dietary practices of children under five years among Maasai pastoralists in Kajiado, Kenya. Int J Behav Nutr Phys Act. 2015; 12:131. https://doi.org/10.1186/s12966-015-0284-3 PMid:26450270 PMCid:PMC4597609

7. Chague F, Varloteaux M, Renaud C, Brune V, Enel C, Stoffel V. [Relations between ethnicity and child malnutrition in rural Benin]. Med Sante Trop. 2013; 23(3):337-43. PMid:24161528

8. Cukljek S, Juresa V, Babic J. The cross-cultural (transcultural) adaptation and validation of the nursing image questionnaire. Nurse Education Today. 2017; 48:67-71. https://doi.org/10.1016/j.nedt.2016.09.006 PMid:27718387

9. McFarland MR, Wehbe-Alamah HB. Leininger's culture care diversity and universality: Jones & Bartlett Publishers, 2014.

10. Giger JN. Transcultural Nursing-E-Book: Assessment and Intervention: Elsevier Health Sciences, 2016.

11. Vu-Augier de Montgremier M, Blanchet-Collet C, Guzman G, Moro MR. [Towards a transcultural approach to eating disorders]. Soins Psychiatr. 2016; 37(307):22-4. https://doi.org/10.1016/j.spsy.2016.09.006 PMid:27890271

12. Bjarnason D, Mick J, Thompson JA, Cloyd E. Perspectives on Transcultural Care. Nursing Clinics of North America. 2009; 44(4):495-503. https://doi.org/10.1016/j.cnur.2009.07.009 PMid:19850185

13. Im E-O, Lee Y. Transcultural Nursing: Current Trends in Theoretical Works. Asian Nurs Res. 2018; 12(3):157-65. https://doi.org/10.1016/j.anr.2018.08.006 PMid:30179700

14. Erika KA. The Effect of Transcultural Nursing, Child Healthcare Model and Transtheoretical Model Approaches to Knowledge and Culture of Family. Jurnal Ners. 2016; 9(2):8. https://doi.org/10.20473/jn.V9I22014.262-269

15. Law K, John W. Homelessness as culture: How transcultural nursing theory can assist caring for the homeless. Nurse Educ Pract. 2012; 12(6):371-4. https://doi.org/10.1016/j.nepr.2012.04.010 PMid:22658675

16. Pulido-Fuentes M, González LA, Martins MdFdSV, Martos JAF. Health Competence from a Transcultural Perspective. Knowing how to Approach Transcultural Care. Procedia - Social and Behavioral Sciences. 2017; 237:365-72. https://doi.org/10.1016/j.sbspro.2017.02.022

17. Lor M, Crooks N, Tluczek A. A proposed model of person-, family-, and culture-centered nursing care. Nurs Outlook. 2016;

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64(4):352-66. https://doi.org/10.1016/j.outlook.2016.02.006 PMid:27061841

18. Drevdahl DJ. Impersonating culture: The effects of using simulated experiences to teach cultural competence. Journal of Professional Nursing. 2018; 34(3):195-204. https://doi.org/10.1016/j.profnurs.2017.10.006 PMid:29929800

19. Ogino M. Transcultural aspects. Journal of the Neurological Sciences. 2017; 381:18. https://doi.org/10.1016/j.jns.2017.08.084

20. Leininger M. Culture care theory: a major contribution to

advance transcultural nursing knowledge and practices. J Transcult Nurs. 2002; 13(3):189-92; discussion 200-1. https://doi.org/10.1177/1045960201300305 PMid:12113148

21. Mixer SJ, Carson E, McArthur PM, Abraham C, Silva K, Davidson R, et al. Nurses in Action: A Response to Cultural Care Challenges in a Pediatric Acute Care Setting. J Pediatr Nurs. 2015; 30(6):896-907. https://doi.org/10.1016/j.pedn.2015.05.001 PMid:26072213

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