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Received 13 November 2018; accepted 17 April 2019 Available online 19 July 2019

KEYWORDS Diabetes; Sundanese culture; Older people	Abstract <i>Objective:</i> The purpose of this study is to determine Sundanese family habits in caring for older people with diabetes in Tasikmalaya, West Java, Indonesia. <i>Method:</i> This study using a qualitative phenomenological method, via in-depth interviews, in which the saturation point was reached at the ten participants. The ethical principles of autonomy, beneficence, maleficence, and justice were applied. <i>Results:</i> This study identified two main topics: first, family ability to perform family health tasks and second, the different types of family cultures that influence taking care of the health of older people, which were reflected through several sub-topics, namely, pampering the parents, doing everything they asked, and controlling all their activities. The habits of pampering and assenting to the wishes of older people with diabetes are highly risky, as, when they are food- related, they can increase blood glucose. <i>Conclusion:</i> The findings of this study reveal that the family habits which highly risky to increase blood glucose older people must be changed through negotiation efforts and cultural restruc- turing, such that the treatments provided are in accordance with the diabetes management pattern. The results of the present study are useful in improving health services for older people with diabetes in the multicultural country of Indonesia. © 2019 Elsevier España, S.L.U. All rights reserved.

* Peer-review under responsibility of the scientific committee of the Second International Nursing Scholar Congress (INSC 2018) of Faculty of Nursing, Universitas Indonesia. Full-text and the content of it is under responsibility of authors of the article.

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https://doi.org/10.1016/j.enfcli.2019.04.111

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Introduction

One of the indicators of the success of a country's development is higher life expectancy. The Central Bureau of Statistics has reported an increase in the life expectancy of Indonesians from 70.1 years in 2010 to 70.9 years in 2015.¹ This has resulted in a year-on-year increase in the proportion of older people, leading to a higher risk of the emergence of various health problems, such as diabetes.

In older people, diabetes occurs in the form of insulin resistance as a result of endocrine disorders, impaired insulin secretion, or both. In addition, lifestyle factors, such as eating habits, physical activities, and inappropriate methods of stress control also contribute to the emergence of diabetes in these individuals.² In Indonesia, cases of diabetes in older people increased from 1.1% in 2007 to 2.1% in 2013. In Tasikmalaya specifically, the incidence increased from 313 cases in 2013 to 570 cases in 2014, with the number of patients who received inpatient treatment due to diabetic complications rising from 64 in 2013 to 262 in 2014.^{3,4} The increase in the number of patients with diabetes, and with diabetes complications, has revealed the need for making serious efforts in the treatment of the disease, with regard to instilling the habits or culture that enable control of risk factors for increased blood glucose, such that further complications can be prevented, and the prevalence will not increase.

Tasikmalaya is a city in West Java, Indonesia in which the major tribe is Sundanese. In Sundanese culture, parents occupy a high status, as stated in an idiomatic expression *inducing tunggul rahayu bapa tangkal darajat* (the mother as the source of salvation and the father as the source of success). This implies that parents are highly respected people who will be a source of happiness for their children. Therefore, in order to gain happiness, safety, and prosperity, the children must be respectful of, and obedient to, their parents, and they do so by making their parents happy and pleased. However, if a child meets all of their parents' dietary requests to please them, despite the risk of increasing their blood glucose levels, it could be a risk factor in triggering health problems in older people with diabetes.⁵⁻⁷

This phenomenon implies that the culture of parental devotion, which is embodied via the action of pleasing them and making them happy, should be able to improve the healthcare of older people, including those with diabetes. However, the reality in Tasikmalaya shows that the incidence of diabetes is still increasing, along with that of various diabetes complications. Therefore, an in-depth study of family habits in caring for older people with diabetes in Tasikmalaya is necessary. Based on that phenomena the research questions is ''what are the essential aspects of caring for older people with diabetes according to the experiences of Sundanese family In Tasikmalaya, Indonesia?''

Methods

Study design

This qualitative study used the phenomenology approach, as it aimed to explore the phenomenon of family habits in

families caring for older people with diabetes in Tasikmalaya city.

Setting and participants

The participants were chosen using a purposive sampling technique with several criteria, namely, a member of a Sundanese family who cared for at least one older person with diabetes in Tasikmalaya city, a willingness to be a respondent, and the ability to describe this caring experience. Of the 20 prospective participants, the saturation point was reached at the ten participants, from the ten participants no one dropped out. This was in accordance with the recommendation of Duke (1984 in Creswell, 2013), such that the number of people in a qualitative research sample should be between 3 and $10.^{8}$

Ethical consideration

The study received approval from the UI Ethics Committee, with the number 105/UN2.F12.D/HKP.02.04/2017, and it also met the necessary ethical requirements, in that the participants were provided with an explanation of the purpose of the study and its possible benefits, after which they gave written consent to take part in the study. In addition, the participants were permitted to choose an interview time and place that was most convenient to them, they were treated fairly, with no discrimination based on age, gender, and religion, and their identity, as well as the results of the study, remained confidential.

Data collection

Some nurses working at Puskesmas (Pusat Kesehatan Masyarakat, or Community Health Center) were involved as key informants in the participant selection process. Data were collected from May to September 2017 through in-depth interviews, using digital sound recordings, field notes, from each participant in their home approximately 60-90 min/sessions, with a total of 18 interview sessions for 10 participants. The experience of the participants determines the tiger family's habits of caring for parents with diabetes was obtained using a semi-structured interview technique. The interview starts with two questions: "Can you tell me how your experience took care of your parent with diabetes?" and what is the meaning of caring for your parents for you? Further interview questions were asked from interviews with interviewees and interviewers asking questions based on the analysis of important data from previous interviews. The participants are effectively leading the direction of the interview, and researchers follow the pattern and contents of the participants' conversation. This helps to avoid bias against areas of special interest of researchers.

Data analysis

Data analyzed using Colaizzi's seven steps phenomenological method. These steps consisted of reading interview transcripts, listening to interview transcripts, selecting keywords, grouping categories, narrating, validating interviews with the participants, and adding new data found in the validation process, and allowed us to obtain an overview of the study results as a whole.

Trustworthiness

The principles of credibility, dependability, confirmability, and transferability were applied to ensure that the data were accountable. The credibility principle was conducted by checking the data on the transcripts provided by the participants. If a statement was confusing or poorly understood, it was clarified with the participant. Dependability and confirmability were shown by how the results were obtained during the process of data collection and analysis by involving the promoter or supervisor as an external reviewer to check and examine the accuracy of the data. Transferability was applied by selecting a Sundanese family caring for an older person with diabetes from another region to assess whether they understood what participants felt according to the theme found in this study.⁹

Results

There were ten participants (one man and nine women), with an age range of 43–58 years. With regard to their occupation, two were retired civil servants, and eight were housewives. Their levels of education varied; four were senior high, four were junior high, and two were elementary school graduates. Three participants lived with their nuclear family, and seven participants lived in extended families. The duration of diabetes in family members of the participants varied from 2 years to 16 years, and all participants were Sundanese.

The present study highlights two main topics: the ability of families to carry out family health tasks, and the various family cultures that influence caring for older people with diabetes.

The ability to carry out family health tasks

A family's ability to perform family health tasks was identified from the sub-topics of its capacity to recognize problems, make decisions, perform care tasks, modify the environment, and utilize health service facilities. A family's ability to recognize diabetes in older people was also one of the categories that demonstrated its capacity to recognize health problems, as revealed by some participants who perceived diabetes as being a hereditary and incurable disease:

"... A hereditary disease.... there is no medicine that can cure it...." (AR)

"... A hereditary disease... the sugar in her blood is high... that's all we know" (DR)

"Sickness due to sugar in the blood being high, a disease that cannot be cured." (ER)

Other participants said that diabetes is a disease caused by taking the wrong medications and eating too many sweets: "... It is caused by consuming too much medicine... for example, he should take only one tablet per day, but he takes two." (SK)

The sub-topic of the ability to make a decision was evident from some family statements related to taking older people with diabetes to seek treatment when they were ill, as shown in the statements below:

''... If she relapses... and we have no money, we usually take her to the hospital....''(CS)

"... First she got a fever, high temperature... the physical state got worse... weak... we took her directly to the doctor" (AM)

"... Stepped on some thorns... then she kept scraping the wound... it became ulcers... getting bigger... finally took her to the hospital to be treated." (NS)

Another sub-topic was the ability of families to care for older people with diabetes, and this was identified from the category of eating arrangements, exercise, and medications that had been given by the family against the wishes of the older people. With regard to eating arrangements, some participants revealed that the family put no limits on older people with diabetes, as shown in the following statements:

"... Just normal meals every day, nothing is forbidden...!" (DR)

"... Our father eats normally, there is no special rule, he has the same as the others..." (EN)

"... Now she can eat anything because there is apple vinegar... so any foods are allowed." (YC)

However, some families selected the foods to be eaten by older people with diabetes, as expressed by those caring for people aged 70 and 68 years, as follows:

"... The foods that are forbidden are sweets, others are not." (IS)

".... Sweets consumption is reduced, drinking syrup is also not allowed, *wait* (a type of Sundanese traditional sweet) is also reduced." (ER)

With regard to the exercise sub-topic, some participants stated that family members always accompany the older person with diabetes when they do exercise, as shown by the following statements:

".... Often accompany her to go jogging... after every dawn prayer..." (AM)

".... Every morning after dawn prayer, we accompany her on a morning walk in the neighborhood..." (IS)

"Has a walk every morning, or sometimes once a week... routinely... accompanied by family members." (EN)

The next sub-topic, caring capability, related to taking medicine. Some participants asserted that the older person with diabetes had routinely taken blood-glucose-lowering medications for as long as they had had the condition, while others stated that this was not the case, as shown in the following assertions:

"... Takes one Gliben tablet per day..." (SK)

"Takes the medicine regularly every day.... now we still have the medicine..." (IS)

"The medicine is Gliben, every day... until later, until he passes away..." (AM)

".... Often change the types of blood-glucose-lowering drugs...." (EN)

"... Usually consumes antlion larvae or mahogany seeds three times a day..." (AN)

"... Drinks two tablespoons of apple vinegar every day, after eating tasty meals like meat, fish, or sweet foods." (YC)

The next sub-topic in the ability to perform family health tasks category was to modify the environment and utilize health services. The former was reflected in the family's efforts to prevent injury, as revealed in the following participant statements:

"... Always remind the mother to wear sandals everywhere...." (ER)

''... Remind her to be careful when cooking, carrying stuff... we're afraid she will slip, then fall....'' (AM)

"... Afraid of her stepping on the thorns... remind her always to wear sandals." (SK)

In efforts to utilize health service facilities, the participants described the blood-glucose control activities of the older people with diabetes, as illustrated in the following statements:

"... If there is extra money I usually accompany her to see the doctor, but if there is not enough money, we usually go to the *Puskesmas*..." (CS)

".... Do you want to check the disease with the doctor or go to the health center? I always ask my mother first..." (EN)

"... For the routine checks, my mother usually goes to the clinic because there is *Prolanis* (*Program Pengelolaan Penyakit Kronis* or Chronic Disease Management Program) once per month..." (NS)

".... If the body feels well... we don't check it, but if it feels numb or there is tingling in the legs, then we will check it again." (DR)

Different family cultures in caring for older people with diabetes

The family culture in caring for older people with diabetes was shown via various behaviors. These were reflected in the sub-topic of pampering the older people, doing everything they wanted, and controlling all their activities. The participant statements below describe these behaviors; they want to fulfill all the needs of the older people and to do as they ask. They also don't allow them to work (and consider it impolite to ask them to do so), so that they don't feel tired:

''All needs are fulfilled... food and clothes are provided... just tells me what is needed.'' (AM)

"All desires must be satisfied....if she wants durian or durian *dodol* (a type of traditional candy) ... we will surely give it to her, although I often remind her not to consume too much of it..." (DR)

``... No food that I won't give her..., any food, if my mother says she wants it then I will buy it.'' (AR)

"... There is no prohibition... so I serve foods according to my father's request...it's The same as the food served to the other family members... she does not want to be differentiated..." (EN)

"... My mother's favorite food is *dodol* with nut... if my mother wants it, I'll give it to her then'" (CS)

"....My father cannot stop smoking... if he asks me, I'll satisfy his request..." (ER)

"... If my mother is sick....she does not want to get any treatments, I do not dare to force her..." (AR)

''..... There is a scheduled Posbindu (Pos Pembinaan Terpadu or The Program of Integrated Coaching Post), I often ask my mother to go there....but my mother often refuses... so she has never been to Posbindu...'' (YC) ''... Just sweeping the yard, for example...it is

"... Just sweeping the yard, for example...it is prohibited...because it can cause her to be sick again..." (DR)

".... It's not polite to let my mother clean up the house. Besides, I don't want to see her tired..." (NS)

".... She has already been forbidden to do gardening, we worry she will step on a thorn again." (SK)

Another habit of the families was the exertion of control by assisting the older people with diabetes in their activities, as revealed in the following statements:

".... Wherever she goes, I accompany her..." (DR)

"... She always goes to recitation with me.... I always accompany her on a morning walk, as well as..." (AM)

".... Goes to the recitation with me." (CS)

Discussion

An interesting finding of the present study is that, when caring for older people with diabetes, the behaviors of Sundanese families can lead to high blood glucose levels in these individuals. Therefore, the habits of pampering and doing everything that older people want must be altered by negotiation or restructuring. Related strategies include the preservation of cultural habits that are not at odds with good health practices, cultural negotiation, which is conducted to help the older people with diabetes and their families adopt habits with health benefits, and cultural restructuring, which is carried out if the habits of families and older people are detrimental to health.¹⁰ In a study conducted in African-American families in Georgia and Iowa, USA, it was shown that the unique role of the family in the form of the habit of regulating and changing intensive lifestyles, particularly with regard to diet, exercise and stress control, is effective in preventing and managing diabetes.¹¹ Therefore, in essence, families with an older member with diabetes should be able to show sensitivity by controlling inner conflicts to provide adequate care¹²; therefore, families should be able to direct, motivate, negotiate, and restructure habits that can trigger increasing blood glucose, without shifting the adopted values and in a manner that is appropriate to Sundanese culture.

The view that older people with diabetes should be prohibited from performing some activities to ensure that they do not get tired, which emerged in the present study, is not in accordance with diabetes management patterns. Overprotective responses from the family can cause negative effects for people with diabetes, because activity and/or exercise are very important in increasing muscle sensitivity to insulin, thereby decreasing insulin resistance.^{13,14} In addition, physical activities can also support the management of diabetes, improve blood circulation, reduce the need for medication, help lower blood glucose, and reduce the risk of complications, such

as heart disease and stroke.¹⁵ Therefore, it is necessary to implement a negotiation and restructuring strategy to change the culture and the family's view, by increasing their awareness of the importance of physical activities for older people with diabetes.

Another habit that was observed in the present study was that of the family's insistence on granting all the requests of the older people with diabetes. The Sundanese people behave in a dutiful and obedient manner toward their parents, by pleasing them and meeting all their requests.^{7,16} Making parents happy is one form of emotional support that can affect the psychology of older people in the treatment of diabetes. The results of a study conducted in African-American people with diabetes demonstrated that emotional support and family trust resulted in a passion for good self-management.¹⁷ This implies that the family can direct the behavior of their parents, according to the appropriate pattern of diabetes management, in an enjoyable manner, using subtle language and effective communication in accordance with Sundanese cultural manners.^{16,18} Therefore, the process of negotiation and the restructuring of inappropriate cultures can ultimately be executed without reducing the level of respect for parents.

Another interesting finding of the present study was the presence of family control in the form of assisting all the older people in their activities. A study of older people with chronic disease in China showed that 18% of the 428 people assessed had increased levels of physical activity after being accompanied by family members.¹⁹ Another study, conducted in 32 people aged 60 years and over who lived in families of two or three generations in Bahia, Brazil, revealed some important findings: family assistance and proximity resulted in harmonious family relationships across the generations, and deep emotional relationships and affective relationships in the family environment were significant in determining the health and welfare of the older people.²⁰ Therefore, family assistance is a culture that must be preserved, as it has positive impacts on the health of older people.

Furthermore, the finding of the present study relating to the lack of family capacity to perform family health tasks, which was identified via recognizing problems, making decisions, caring, modifying the environment, and utilizing health services, is an issue that must be addressed, because knowledge is the basis of the formation of behavior and culture, and a culture or habit can be established through increased knowledge.¹⁸ The results of the current study showed that there is a positive relationship between knowledge of diabetes and diabetes self -management behavior, medication adherence, good footcare habits, and effective blood glucose contro.²¹ In addition, adequate knowledge of diabetes can ensure avoidance of risky habits and lifestyles that may lead to complications.²² Thus, knowledge of diabetes in older people with the disease can form the basis of a new culture and family ability in caring for these individuals.

The family's ability to take care of older people with diabetes, particularly with regard to eating arrangements, did not meet the rules of eating management for diabetes patients in the present study. Meal planning for people with diabetes should be tailored to the caloric needs of each patient. However, meal planning in older people with the disease should be in accordance with their culture or habits as much as possible, in the sense that good habits are continued and unfavorable habits should be stopped.^{10,23}

Another important finding of the present study was the lack of utilization of health service facilities. In the efforts to monitor blood glucose levels, such utilization is an important component of the management of diabetes in Indonesia, in addition to education, diabetes drug administration, and examination of symptoms of complications.²⁴ Thus, negotiation efforts aimed at increasing visits to health services should be carried out by the families of older people with diabetes, considering the importance of blood glucose control in the early detection of possible complications.

The strength of this study is that the data provided sufficient variation and accuracy according to an internal data analysis performed by the author based on reading the first versions of the transcripts and checking the participants' descriptions in their language (Sundanese language). Limitations of this study were the difficulty of communicating with some participants of varying degrees of education and age, so the researcher had to illustrate questions that were not understood by the participants.

Conclusions

Family habits in caring for older people with diabetes in Tasikmalaya were illustrated via families' ability to recognize problems, make treatment decisions, take care of health, modify the environment, and utilize health services. In addition, the different types of culture that families in Tasikmalaya have in the form of pampering older people with diabetes, doing everything they want, and controlling all their activities, showed that some habits or cultures require the attention of health officers, particularly community nurses, because they can result in the increase of blood glucose. Negotiation and cultural restructuring efforts are required to align the behaviors of the older people with diabetes and their families, such that the Sundanese culture of considering parents as highly respected people can form the basis for supporting the creation of adequate management of diabetes in older people. The recommendation of diabetes treatment for such an individual in Tasikmalaya should be based on the approach of Sundanese culture. Therefore, the Sundanese family culture-based nursing model, which describes the management of diabetes in older people within the framework of Sundanese culture, is required.

Conflict of interests

The authors declare no conflict of interest.

Acknowledgements

This work is supported by Hibah PITTA 2017 funded by DRPM Universitas Indonesia No. 381/UN2.R3.1/HKP.05.00/2017.

References

1. BPPS. Proyeksi Penduduk Indonesia 2010–2035. Jakarta: Badan Pusat Statistik; 2013.

- Miller CA. Nursing for wellness in older adults. 6th ed. Lippincot: Williams & Wilkins; 2012. p. 43.
- 3. BPPK. Riset Kesehatan Dasar 2013; 2013. p. 90.
- 4. Systemdr SHI. The number of new cases by age group; 2014. p. 18.
- Satjadibrata R. Kamus Basa Sunda. Bandung: Kiblat buku utama. Bahasa, Indonesia: Bahasa Sunda; 2005. p. 35.
- Rosidi A. Manusia sunda. Bahasa, Indonesia: Inti Idayu Press; 1984. p. 38.
- Suparlan P. Hubungan Antar Suku Bangsa. Yayasan Pengembangan Kajian Ilmu Kepolisian: Jakarta; 2004. p. 35. Bahasa, Indonesia.
- Creswell JW. Qualitative inquiry and research design: choosing among five approaches. 3rd ed. Sage Publications; 2012. p. 108.
- **9.** Streubert HJ. Dona Rinaldi Carpenter qualitative research in nursing: advancing the humanistic imperative. 5th ed. Lipincot: Williams & Wilkins; 2010.
- Leininger M, Marilyn R. McFarland. Transcultural nursing: concepts, theories, research and practice. 3rd ed. McGraw-Hill Education/Medical; 2002.
- 11. Seawell AH, Hurt TR, Shirley MC. The influence of stress, gender, and culture on type 2 diabetes prevention and management among black men. Am J Men's Health. 2016;10:149–56, http://dx.doi.org/10.1177/1557988315580132
- Ahmed Z, Yeasmeen F. Active family participation in diabetes self-care: a commentary. Short Commun Diabetes Manag. 2016;6:104–7.
- Rosland AM, Heisler M, Piette JD. The impact of family behaviors and communication patterns on chronic illness outcomes: a systematic review. J Behav Med. 2012;35:221–39, http://dx.doi.org/10.1007/s10865-011-9354-4
- Hinkle JL, Cheever KH. Brunner and Suddarth's textbook of medical-surgical nursing. 13th ed. Philadelphia: Lipincot: Williams & Wilkins; 2013.
- 15. National Institute on Aging. Exercise and physical activity|National Institute on Aging [Internet]. Available from:

https://www.nia.nih.gov/health/exercise-physical-activity [cited 13.03.18]

- **16.** Ekajati ES. Kebudayaan Sunda: Suatu pendekatan sejarah. Bandung: Pustaka jaya; 1995.
- Chesla CA, Fisher L, Mullan JT, Skaff MM, Gardiner P, Chun K, et al. Family and disease management in African-American patients with type 2 diabetes. Diabetes Care. 2004;27:2850–5, http://dx.doi.org/10.2337/diacare.27.12.2850
- William A, Haviland HELP, McBride B, Walrath D. Cultural anthropology: the human challenge. 14th ed. Wadsworth Publishing; 2013.
- 19. Yuan S-C, Weng S-C, Chou M-C, Tang Y-J, Lee S-H, Chen D-Y, et al. How family support affects physical activity (PA) among middle-aged and elderly people before and after they suffer from chronic diseases. Arch Gerontol Geriatr. 2011;53:274–7, http://dx.doi.org/10.1016/j.archger.2010.11.029
- 20. da Silva DM, Vilela ABA, Nery AA, Duarte ACS, Alves M, dos R, et al. Dinâmica das relações familiares intergeracionais na ótica de idosos residentes no Município de Jequié (Bahia), Brasil. Cien Saude Colet. 2015;20:2183–91, http://dx.doi.org/10.1590/1413-81232015207.17972014
- 21. Luo X, Liu T, Yuan X, Ge S, Yang J, Li C, et al. Factors influencing self-management in chinese adults with type 2 diabetes: a systematic review and meta-analysis. Int J Environ Res Public Health. 2015;12:11304–27, http://dx.doi.org/10.3390/ijerph120911304
- 22. Mohan D, Raj D, Shanthirani CS, Datta M, Unwin NC, Kapur A, et al. Awareness and knowledge of diabetes in Chennai the Chennai Urban Rural Epidemiology Study [CURES-9]. J Assoc Phys India. 2005;53:283–7.
- 23. Pradana Soewondo SS. Penatalaksanaan diabetes terpadu: panduan penatalaksanaan diabetes melitus bagi dokter dan edukator. Bahasa, Indonesia: Fakultas Kedokteran Universitas Indonesia; 2009.
- Soewondo P, Ferrario A, Tahapary D. Challenges in diabetes management in Indonesia: a literature review. Global Health. 2013;9:63, http://dx.doi.org/10.1186/1744-8603-9-63