

How Do Elderly People with Malnutrition and Their Families Perceive Collaborative Practice in Primary Care?: A Phenomenological Study

Fitriana Mawardi^{1,2}, Ayuningtyas S Lestari³, Hirotaka Onishi⁴, Elsa P S Sasongko², Hari Kusnanto¹, Dany Hilmanto⁵

¹Community and Family Medicine Department, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Yogyakarta Province, Indonesia

²Public Health Department, Faculty of Medicine Universitas Padjadjaran, West Java, Indonesia

³Nursing Study Program, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Yogyakarta Province, Indonesia

⁴Department of International Cooperation for Medical Education, School of International Health, The University of Tokyo, Japan

⁵Health Pediatric Department, Faculty of Medicine, Universitas Padjadjaran, West Java, Indonesia

Correspondence Information: Dr. Fitriana Mawardi, Community and Family Medicine Department Faculty of Medicine, Public Health and Nursing Universitas Gadjah Mada, Indonesia, Jalan Farmako Sekip Utara Caturtunggal Depok Sleman 55281, fitriana.8918@ugm.ac.id

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Abstract:

As a frequent and serious problem in elderly people, malnutrition is a complex health issue. It requires comprehensive care through Interprofessional Collaborative Practice (IPCP) engaging five health professionals in primary care consisting of a physician, dentist, nurse, dietitian, and pharmacist. In Indonesia, the usual care involves monthly health screening in community programs named *Posyandu*. This study aimed to explore perceptions of elderly people with malnutrition and their families' experiences with interprofessional teams compared with usual care in primary care. This qualitative study used the phenomenological approach based on Creswell. Interviews were conducted with 14 elderly people and their families in the intervention group and 14 elderly people with their families in the control group. Data were analyzed using the four steps of descriptive qualitative analysis described by Giorgi, including comparing the experiences of both groups. Elderly people with malnutrition in the intervention group had more valued experiences regarding two-way communication with the IPCP team and felt it involved more comprehensive care for malnutrition management. Participants in the control group experienced communication between the health care providers and elderly people; however, it was not clear enough. There were overlapping roles among health care providers in the usual care. However, both groups shared the experience that family members are partners in nutritional management. Elderly people and their families in the intervention group have more valuable experiences related to two-way communication and comprehensive care. Family as partners was experienced in both the intervention and control groups.

Keywords: Community medicine, elderly, interprofessional collaborative practice, malnutrition, primary care

A. Introduction

The number of elderly people is projected to grow from an estimated 524 million in 2010 to nearly 1.5 billion in 2050, with most of the increase in developing countries.¹ The aging process in elderly people can have many deleterious effects including reduction of physical function, negative emotional responses, and decreased social interactions and productivity. These can cause a significant burden on the healthcare system.^{2,3} Malnutrition is one of the most common health problems linked with physiological and psychological changes caused by the aging process in elderly people.

Based on *European Society for Clinical Nutrition and Metabolism* (ESPEN), malnutrition is a state of nutrition in which a deficiency or excess (or imbalance) of energy, protein, and other nutrients causes measurable adverse effects on tissue/body form (body shape, size and composition) and function, and clinical outcomes.⁴ Malnutrition in elderly people is reflected by either involuntary weight loss or low body mass index. However, prevalence of malnutrition strongly depends on the setting, on underlying diseases, as well as on screening and assessment methods.⁵ According to one systematic review and meta-analysis conducted by Cereda et al. in 2016, prevalence data of malnutrition and nutritional risk in elderly people across different healthcare settings showed a wide range of malnutrition from 3% in the community setting to approximately 30% in rehabilitation.⁶

Malnutrition in elderly people has been recognized as a challenging health concern associated with not only increased mortality and morbidity, but also with physical decline. These have serious implications for activities of daily living and quality of life in general.⁵ The consequences of untreated malnutrition problems are costly. Malnutrition can have profound detrimental impacts including increased health complications, extended length of hospital stay, increased antibiotic prescriptions, and hospital readmission.⁷

One of promising ways to manage complex health problems including malnutrition in elderly people is through the collaboration of health care providers. The World Health Organization (WHO) in 2010 recognized interprofessional collaborative practice (IPCP) as an innovative strategy that will play an important role in mitigating the numerous current global health crises. Collaborative practice happens when multiple health workers from different professional backgrounds work together with patients, families, communities to deliver the highest quality of care.⁸ In

Indonesia, the Ministry of Health has already implemented several strategies to prevent health problems in elderly people through routine community monthly screenings by primary care providers. This program is conducted by midwives or nurses who have the responsibility as the persons in charge of the elderly programs.⁹

In Indonesia, the majority of elderly people in the general population live with their children and family at home.¹⁰ Recent research showed that the patient and family centered care will improve interdependence among patients, families, and health care professionals to achieve optimal health outcomes. Involving family members as key partners in IPCP is a recommended strategy to improve health outcomes.¹¹

Even though researchers have reported some studies related to IPCP in the care of older adults, however, the research using the views of elderly people and their families is limited and unclear. This study aimed to address the following question: What are the experiences of malnourished elderly people and their family after being involved in the management of malnutrition with IPCP approach compared with usual care in primary care setting?

B. Methods

Design

This was a qualitative study using the phenomenological approach. Creswell in 2007 stated that qualitative research has several characteristics including natural setting where participants experience the issue or problem to be studied, the researcher acts as the key data collection instrument, and the analysis is focused on participants' perspectives.¹² The phenomenological approach is widely used as a method to explore and describe the lived experiences of individuals. In its application to research, the philosophical underpinnings of Husserl phenomenology involve detailed reporting of participants' natural attitudes, intentionality, and phenomenological reduction.¹³

Sampling

Whenever possible we interviewed the elderly people and their family members together. Elderly people and their family in primary care setting were recruited with the purposive sampling technique. The elderly people and their family members lived in the working area of primary health care in Sleman District, Daerah

Istimewa Yogyakarta, Indonesia that have primary accreditation. The elderly people who met the criteria was chosen from the database of the primary health centers. The allocation of participants was completely independent.

The inclusion criteria of elderly people were aged 60 or over who live with their family, have been categorized as malnutrition based on the Mini Nutritional Assessment (MNA) screening conducted by primary care providers, and can fluently speak in Indonesian or Javanese. The participants who refused to participate, or have more than two diseases or an uncontrolled degenerative disease were excluded from this study.

The inclusion criteria of the elderly people's family were: family members who have marriage relationship or blood relation with the elderly people, live with the elderly people more than one year, and participate in nutritional care in their home based on implementation from either IPCP or usual care. The family member who refused to be a participant was excluded in this study.

Intervention Group

In this study, the IPCP implementation was given by an IPCP team from primary care providers consisting of a general physician, dentist, nurse, dietitian, and pharmacist who did home visitations once for 45 minutes. They conducted comprehensive assessments including head-to-toe examination, nutritional status, oral health check, and prescribed routine medication if any were needed. Then, they performed innovative strategies such as given health education, showed simple methods in how to prepare healthy food, and provided encouragement to the patients and family. In the process, the patients and family were empowered to prepare the food by themselves.

Control Group

In the control group, the malnourished elderly people and their family received their usual care from the primary health center. The usual care was the community monthly screening program named integrated service center (*Posyandu*) for the elderly people provided by the primary health center which was done by a nurse or midwife. *Posyandu* is a program implemented by the Indonesian Ministry of Health to monitor the health status of elderly people with community-based programs. In the *Posyandu* program, the elderly people's weight, height, and blood pressure are measured, and

they also receive supplementary food, and participate in general health education through volunteer cadres delivered to the elderly people.

Data Collection

In-depth interviews were held at a place of the participants' choosing in Sleman District, Daerah Istimewa Yogyakarta, Indonesia in November 2020. Most of the interviews were conducted in the participants' home. Questions were open-ended focusing on exploring elderly people and their family's experiences and perspectives based on a survey developed by Henry et al.¹⁴ The list of questions are listed in Table 1. The data collection was conducted until the data reached saturation, which means that no additional data were needed to develop the coded properties of each of the categories.¹⁵ We decide no further sampling after the data was saturated.

Data Analysis

The research team used the phenomenological analysis approach developed and described by Giorgi in 1997, which consists of four steps including: to read for a sense of the world, with the clear determination of the essential parts: establishing meaning units, transformation of meaning units into coded categories, and determination of structure.¹⁶

The leader of this study is FM who have experience in conducting qualitative study especially in community and family medicine. Two authors (FM and ASL) listened to the recorded interviews separately and made transcripts. We trained the coders who were responsible to arrange codes based on the transcripts of interviews. After discussion concerning the codes, FM, ASL, EPSS, and DH reached an agreement about codes that represent the data, and then grouped similar codes together into categories. The categories were examined to develop meaningful themes with quotes from participants to support the main themes and identified categories.

Strategies to Enhance Quality of Study

The trustworthiness of this study based on the credibility process used triangulation. Triangulation aims to enhance the process of qualitative study using multiple approaches. Investigator triangulation was applied through involving several researchers as research team members and involving them in the process of data analysis. Data were analyzed by three different researchers (FM, ASL, HO). The

research team held regular meetings during the analysis process. If there were different interpretations, the issue was discussed with other research members (DH, EPSS, HK) until the most suitable interpretation was found.

Ethical Issues

This study was conducted according to the guidelines laid down in the Declaration of Helsinki and all procedures involving human subjects were approved by the Research Ethics Committee of Universitas Padjadjaran with protocol number 914/UN6.KEP/EC/2020. Written informed consent was obtained from all subjects. To meet the ethical considerations, recruitment of participants was voluntary, anonymity of all participants was maintained, and the control group was given the IPCP implementation in the end of the research for equality

C. Results

The Characteristics of the Participants

We conducted the in-depth interviews until the data reached saturation. The data were saturated in the interviews with the 14th participant of the intervention group and the 14th participant of the control group. Fourteen elderly people and their families in the intervention group received the IPCP implementation and 14 elderly people and their families from control group provided comparison through their experiences with usual care in primary care. With these two groups, a total of 28 volunteers who are elderly people with malnutrition participated in this study. The participants' characteristics are presented in Table 1.

Experiences with the interprofessional team compared with usual care were described from the elderly people and their family's perspectives. The elderly people and their family talked about their experiences and felt they received more comprehensive care from the interprofessional team and received better health education related to nutrition management. The elderly people and their families from the control group who received the usual standard care experienced overlapping of roles in healthcare and felt unsatisfied from the usual care. These perspectives are further discussed and elaborated in the themes of: (1) Two-way communication, (2) Comprehensive care, and (3) Family as a partner. The process of thematic analysis is described in Figures 1: Thematic analysis of two-way communication theme, Figure

2: Thematic analysis of comprehensive care themes, and Figure 3: Thematic analysis of family as a partner theme.

1. Two-way Communication

The communication between elderly people and their family with health care professionals is essential. Elderly people and their families identified that effective communication of health care providers was necessary in ensuring the elderly people needed nutritional supplementation and involving them in their health care considerations. The IPCP team discussed their problems together and involved the elderly people and family in describing what would meet their needs to improve their nutritional status. The IPCP team gave additional health education and involved the family members to conduct nutritional care for the elderly people.

The elderly people and their family in the control group who received the usual care felt that there was communication from the health care providers but it was not always clear. Even though the elderly people and their family got information related to aging and health through the health education in *Posyandu*, however, they felt it was not enough. Afterwards, they were still confused about nutritional management in their home.

2. Comprehensive Care

Malnutrition is one of the complex health problems that has multi-factorial causes. The elderly people and their families in the intervention group felt that they received more comprehensive care from the IPCP team compared with usual care. The IPCP team members consist of a physician, dentist, nurse, dietitian, and pharmacist. They share roles and responsibilities with a primary focus on the patient and their family to address the issue of malnutrition more comprehensively.

In the control group, the respondents felt there was some teamwork in the usual care, however, they felt it was not comprehensive enough to improve their nutritional status. The elderly people felt that there were some overlapping roles in usual care for malnutrition management. The health care providers who have the responsibility to provide malnutrition consultation and management in *Posyandu* are a midwife or a nurse. Meanwhile, the main responsibility of the midwife is the perinatal concerns in maternal and child health.

3. Family as a Partner

The collaboration of family and health professionals is important to support patient-family centered care. Family members provide an integral support for the elderly people. Both the intervention and control groups indicated that the family members have some participation in the care of the malnourished elderly people. In the interviews, they shared that they feel happy being involved in the nutritional management for the elderly people with malnutrition.

D. Discussion

To our knowledge, this is the first qualitative study providing evidence about the experiences of elderly people and their families while engaging with an interprofessional team for malnutrition management. The findings of this study show the depth of knowledge related to how the elderly people and their families perceived the three main areas of expressed concerns: the two-way communication, comprehensive care, and family as a partner.

In the intervention group who received IPCP implementation, the elderly people have experiences related to the two-way communication from their sharing with the IPCP team. Clear, direct, closed-looped communication is crucial to provide safe patient centered care. To reach this goal, health care providers in IPCP can express their professional knowledge equally to provide respectful and non-judgmental communication with patients.¹⁷

Elderly people and their families also have experiences related to more comprehensive care in the intervention group. This study's findings are supported by Tsakitzidis et al. in 2017 that found elderly people who receive a comprehensive care intervention perceived significantly higher quality of care.¹⁸ More comprehensive care can be provided through health professionals from multiple professions working together as a team.¹⁹

The importance of family as a partner in elderly people's nutritional management was supported by Wolff et al. in 2017 who found that elderly people are more vulnerable to malnutrition and other health issues and typically chose to involve family when communicating with health professionals and managing their care. Family members can give beneficial roles by facilitating information exchange and making informed medical decisions. In the IPCP research, home visitations from

health providers were found to be significantly more patient-centered than treatment visits.²⁰

In the control group, the *Posyandu* program was not enough to improve the nutritional status for elderly people with malnutrition. These results are supported by a qualitative study conducted by Risna et al. in 2018 that showed IPCP practices were not observed based on their observations of the activities and conditions in *Posyandu*. Without any team approach, only specific professions had the opportunity to carry out their activities during *Posyandu*. The *Posyandu* meetings were usually held in a house of some local people that may limit counseling activities or health promotion. This gap in teamwork indicates that the involvement of all health professions is needed.⁹

The results can provide some suggestions for health policy in primary care settings. One of the strengths of this study was including the experiences of malnourished elderly people and their family from two points of view, including an intervention group with IPCP experiences and a control group who received their usual care in a primary care setting. While limited by the availability of only a small sample population, the number of participants was appropriate enough for a qualitative study. Further study that involves a variety of cultures could significantly add to our understanding about the experiences of IPCP for elderly people who are malnourished and their families.

E. Conclusions

This study explored the elderly people' and their families' experiences and revealed that the intervention from the IPCP team involved two-way communication and comprehensive care for malnutrition management. In the control group, there were overlapping roles and not comprehensive enough care based on the usual care in malnutrition management. Both groups shared the experience that family involvement in elderly people care is a positive experience as a partnership in health.

Disclosure Statements

Ethical Considerations: This study was approved by the Medical and Health Research Ethics Committee with protocol number 914/UN6.KEP/EC/2020. To meet the ethical considerations, recruitment of participants was voluntary, and anonymity of all participants was maintained.

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Author Contribution:

- Fitriana Mawardi : Lead the research
formulating the research questions
designing the study
data collection
listened to the recorded interviews separately with ASL
made transcripts
interpreting the findings
writing the article
- Ayuningtyas S Lestari : Assist to formulate the research questions
assist to design the study
data collection
listened to the recorded interviews separately with FM
made transcripts
interpreting the findings
writing the article
administration of research
- Hirota Onishi : Conducted codes that represent the data
Grouped similar codes together into categories
Substantially contributed to the research conception
approved the final manuscript
- Elsa P S Sasongko : Supervisor of research
Conducted codes that represent the data
Grouped similar codes together into categories
substantially contributed to the research conception
approved the final manuscript

Hari Koesnanto : Supervisor of research
Conducted codes that represent the data
Grouped similar codes together into categories
substantially contributed to the research conception
approved the final manuscript

Dany Hilmanto : Head of supervisor of research
Conducted codes that represent the data
Grouped similar codes together into categories
substantially contributed to the research conception
approved the final manuscript

F. Bibliography

1. World Health Organization. *Global Health and Aging*. National Institute of Health; 2011.
2. Kristianingrum ND, Wiarsih W, Nursasi AY. Perceived family support among older persons in diabetes mellitus self-management. *BMC Geriatr*. 2018;18(Suppl 1):1-5.
3. Ishak NH, Yusoff SSM, Rahman RA, Kadir AA. Diabetes self-care and its associated factors among elderly diabetes in primary care. *J Taibah Univ Med Sci*. 2017;12(6):504-511. doi:10.1016/j.jtumed.2017.03.008
4. Lochs H, Allison SP, Meier R, et al. Introductory to the ESPEN guidelines on enteral nutrition: terminology, definitions and general topics. *Clin Nutr*. Published online 2006:180-186. doi:10.1016/j.clnu.2006.02.007
5. Norman K, Haß U, Pirlich M. Malnutrition in older adults-recent advances and remaining challenges. *Nutrients*. 2021;13(8). doi:10.3390/nu13082764
6. Cereda E, Pedrolli C, Klersy C, Bonardi C, Quarleri L. Nutritional status in older persons according to healthcare setting: a systematic review and meta-analysis of prevalence data using MNA ®. *Clin Nutr*. 2016;(April). doi:10.1016/j.clnu.2016.03.008
7. Arjuna T, Soenen S, Hasnawati RA, Lange K, Chapman I, Luscombe-marsh ND. A cross-sectional study of nutrient intake and health status among older adults in Yogyakarta Indonesia. *MDPI Nutr*. Published online 2017. doi:10.3390/nu9111240
8. World Health Organization. *A WHO Report: Framework for Action on Interprofessional Education and Collaborative Practice*. Vol 39.; 2010.
9. Risnah, Hadju V, Maria IL, Nontji W. Interprofessional collaboration practices: case study of the handling of malnutrition in three public health centers in South Sulawesi. *Pakistan J Nutr*. 2018;17(8):379-385. doi:10.3923/pjn.2018.379.385
10. Plöthner M, Schmidt K, Jong L De, Zeidler J, Damm K. Needs and preferences of informal caregivers regarding outpatient care for the elderly: a systematic literature review. *BMC Geriatr*. Published online 2019:1-22.

11. Marshall AP, Lemieux M, Dhaliwal R, Seyler H, Maceachern KN, Heyland DK. Novel, family-centered intervention to improve nutrition in patients recovering from critical illness: a feasibility study. *Nutr Clin Pract*. Published online 2017. doi:10.1177/0884533617695241
12. Creswell JW. *Qualitative Inquiry & Research Design*. SAGE Publication; 2007.
13. Christensen M, Welch A, Barr J. Husserlian descriptive phenomenology: a review of intentionality, reduction and the natural attitude. *J Nurs Educ Pract*. 2017;7(12):81. doi:10.5430/jnep.v7n12p81
14. Henry BW, Mccarthy DM, Nannicelli AP, Seivert NP, Vozenilek JA. Patients' views of teamwork in the emergency department offer insights about team performance. *Heal Expect*. 2016;19(3):702-715. doi:10.1111/hex.12148
15. Saunders B, Sim J, Kingstone T, et al. Saturation in qualitative research: exploring its conceptualization and operationalization. *Qual Quant*. 2018;52(4):1893-1907. doi:10.1007/s11135-017-0574-8
16. Giorgi A. The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *J Phenomenol Psychol*. 1997;2(28):235-260.
17. Stadick JL. Understanding health care professionals' attitudes towards working in teams and interprofessional collaborative competencies: a mixed methods analysis. *J Interprofessional Educ Pract*. 2020;21(June):100370. doi:10.1016/j.xjep.2020.100370
18. Tsakitzidis G, Timmermans O, Callewaert N, Verhoeven V. Outcome indicators on interprofessional collaboration interventions for elderly. *Int J Integr Care*. 2017;16(2):1-17.
19. Harris MF, Advocat J, Crabtree BF, et al. Interprofessional teamwork innovations for primary health care practices and practitioners: evidence from a comparison of reform in three countries. Published online 2016:35-46.
20. Wolff JL, Guan Y, Boyd CM, et al. Examining the context and helpfulness of family companion contributions to older adults' primary care visits. *Patient Educ Couns*. 2017;100(3):487-494. doi:10.1016/j.pec.2016.10.022

Table 1. List of Questions

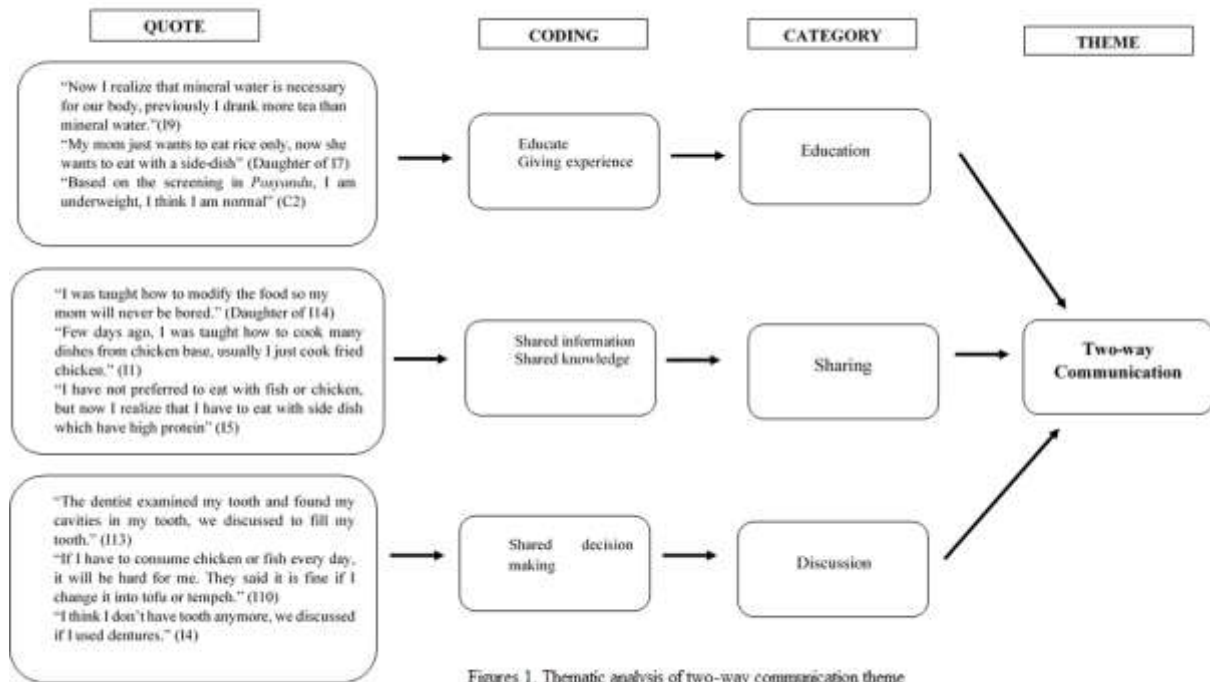
List of Questions for Older Adults
1. How was your general impression about the primary health care provider as a team?
2. How did the health care providers communicate with each other related to your health problem?
3. Of all the aspects we discussed about interactions between primary health care providers who you saw during home visitation, which one is most important to you?
4. What makes it important?
5. How would you describe the way primary health care providers worked together with family members?
6. How do teamwork behaviors impact patient outcomes?
7. Do you see any connections between teamwork behaviors patients may observe and domains of teamwork?
8. Is there any behavioral change before and after the intervention for your nutritional status?
9. Are there any challenges in implementation of nutritional status improvement?
10. Is there anything that we should have talked about but didn't?
List of Questions for Family
1. How was your general impression about the primary health care providers as a team?
2. How did the health care providers communicate with each other related to your parent's health problem?
3. How does the family involvement help to improve nutritional status of older adult?
4. Is there any behavioral change to improve nutritional status of older adult?
5. Are there any challenges in the implementation of nutritional status management for older adult?
6. Is there anything that we should have talked about but didn't?

Source: Patients' views of teamwork in the emergency department offer insights about team performance (2016).

Table 2. Participants' characteristics

Intervention Group				Control Group			
Participant	Age Range (years old)	Gender	Family Caregiver	Participant	Age Range (years old)	Gender	Family Caregiver
I1	60-69	F	Son	C1	60-69	F	Daughter
I2	80-90	F	Daughter-in-law	C2	70-79	F	Daughter
I3	70-79	F	Daughter	C3	70-79	M	Daughter-in-law
I4	60-69	F	Daughter	C4	60-69	F	Daughter
I5	60-69	F	Daughter	C5	80-90	F	Daughter
I6	70-79	M	Wife	C6	70-79	M	Daughter-in-law
I7	80-90	F	Daughter	C7	60-69	F	Daughter
I8	70-79	F	Daughter-in-law	C8	70-79	F	Daughter
I9	60-69	M	Daughter	C9	70-79	M	Son
I10	70-79	F	Daughter-in-law	C10	60-69	F	Daughter
I11	80-80	F	Daughter	C11	60-69	F	Daughter
I12	60-69	F	Daughter	C12	70-79	F	Daughter
I13	80-90	F	Son	C13	70-79	M	Daughter
I14	60-69	F	Daughter	C14	70-79	F	Daughter

Source: Primary data (2020).



Figures 1. Thematic analysis of two-way communication theme

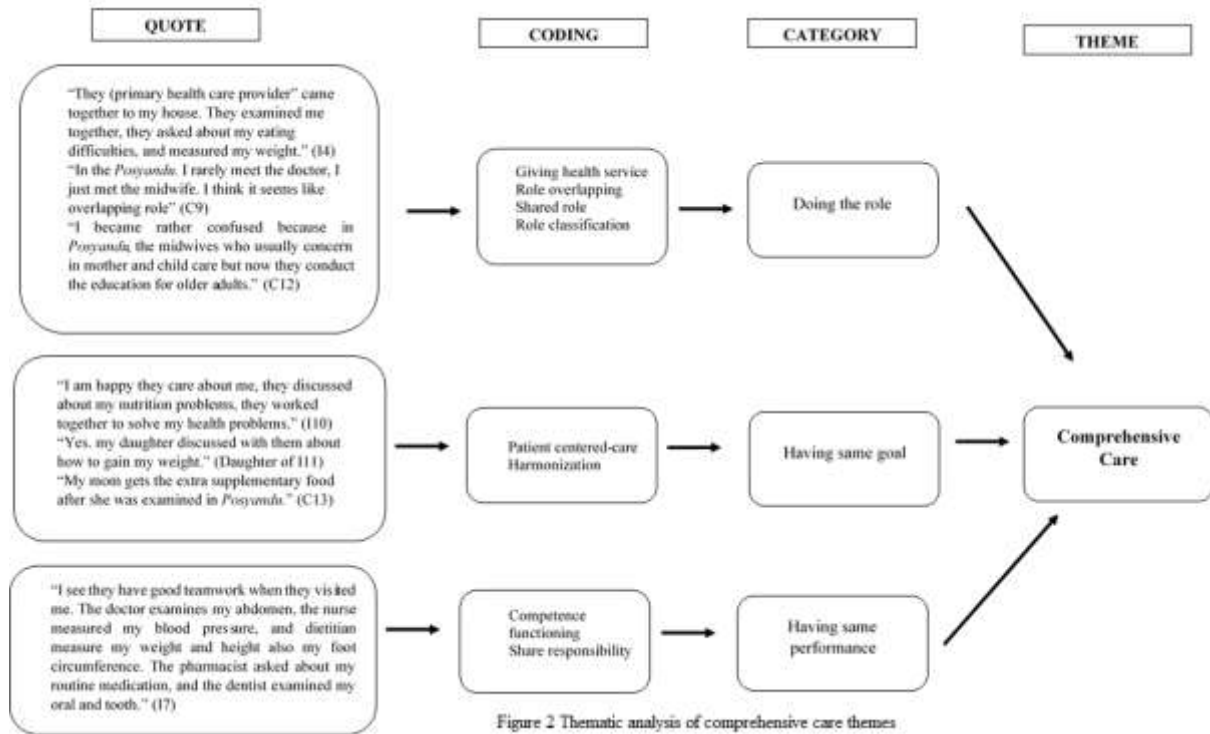


Figure 2 Thematic analysis of comprehensive care themes

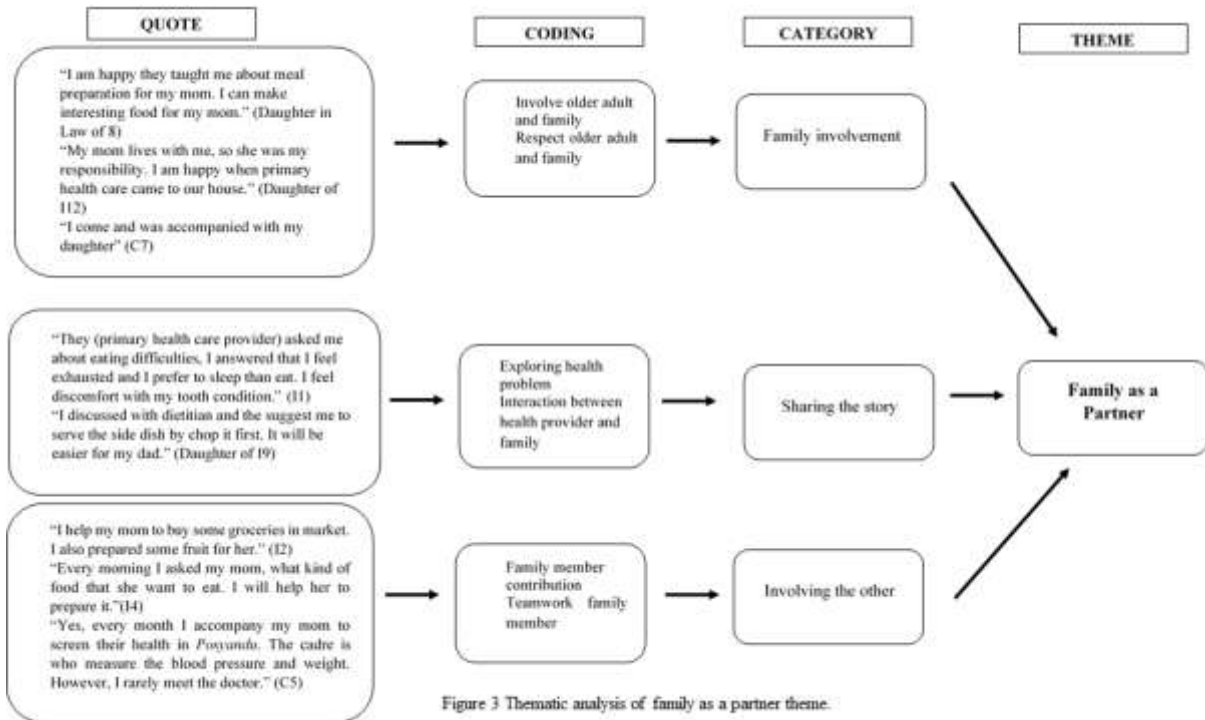


Figure 3 Thematic analysis of family as a partner theme.