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Quality of life of elderly tobacco farmers in the perspective of agricultural nursing: a qualitative study

Tantut Susanto and Nur Widayati

Abstract

Purpose – The purpose of this paper is to explore the meaning of quality of life of elderly tobacco farmers in the perspective of agricultural nursing.

Design/methodology/approach – This was a qualitative study with a descriptive phenomenological design conducted in rural area of Jember from November until December 2013. Seven elderly tobacco farmers participated in this study by purposive sampling technique. Data were collected through semi-structured in-depth interview and analyzed by using a qualitative descriptive method.

Findings – Six themes emerged from data analysis included physical condition, psychological condition, activity level, social relationships, environmental condition and worship activities.

Practical implications – The role of agricultural health nurses should be optimized to improve quality of life of elderly farmers by promoting the health status of elderly farmers and the health of workplace environment.

Originality/value – Elderly tobacco farmers reported decreased health and decreased energy and vitality. Tobacco farming was considered giving heavy workload, especially during harvest season. Participants were still actively participating in activities conducted in the community and eagerly doing worship activities. The environment conditions were described as the easiness of transportation, affordability of health care facilities, safe environment and tobacco storage effects during harvest season.

Keywords Workplace, Quality of life, Older people, Qualitative study, Agricultural nursing, Tobacco farmers

Paper type Research paper

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Introduction

Farmers tend to keep working for longer than people in other professions (Hernandez-Peck, 2001). In rural areas, more than 55 years old farmers continue to work until they feel no longer physically strong, only then do they stop (Tamher and Noorkasiani, 2009). Physical makes older farmers more susceptible to injuries, diseases and the ability to conduct their work-related activities safely (Hernandez-Peck, 2001). Agricultural work can cause stress because of a number of reasons. These can be financial, weather conditions, workload, type of social interaction and agricultural problems (Ramesh and Madhavi, 2009). Stress, health problems, working hours and the nature of agricultural work are factors that impact on the quality of life of farmers (Winton *et al.*, 2014). Agricultural health nurses play an important role in promoting health and safety, as well as health education. They conduct follow-up assessments of injuries or illnesses caused by agricultural exposure (Lundvall and Olson, 2001).

Tobacco is one of the leading agricultural products in Jember, Indonesia (Indonesia Directorate General of Plantation, 2014). Older tobacco farmers in the Sukowono district of Jember report high workload and stress levels (Intani, 2013). Tobacco farming is relatively risky, because of the risk of losses due to inclement weather, pests and uncertain tobacco prices. The success of tobacco farming is influenced by many factors. These include soil condition, climate, cultivation techniques, harvest and available marketing networks. The profits of tobacco farming are not large, especially when the amounts of energy and investment spent during the

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process are taken into consideration (Ahsan *et al.*, 2008). The cultivation of tobacco also puts farmers at risk of health-threatening diseases (e.g. hypertension, respiratory diseases and cancer) (Huong *et al.*, 2009).

Farming-related stress has a number of effects on physical and mental well-being. Most often these are: sleep deprivation, back problems, work-related worry and anxiety, irritability and feelings of sadness (Parry *et al.*, 2005). The higher the level of stress, the more likely a farmer will exhibit symptoms of physical and psychological stress. Excessive stress can decrease efficiency and productivity, prevent enjoying life and increase vulnerability to accidents, with impacts on the farmer's family (Ramesh and Madhavi, 2009). The combined effects of stress interact with each other and influence negatively the psychological well-being of farmers (Ang, 2010).

Working ability is the capacity to perform work productively and competently, so that the purpose of work is achieved without experiencing physical and psychological overload (Guidotti, 2011). In the Indonesian context, health promotion that includes prevention, health protection and health education is a role that is often performed by occupational health nurses (Thornbory, 2014). Agricultural health nurses play an important role as a liaison between health, agricultural and non-agricultural communities (Lundvall and Olson, 2001). However, agricultural nursing needs to be improved to promote the physical and mental well-being of older tobacco farmers. The aim of this paper is to explore the meaning of "quality of life" for older tobacco farmers, from the perspective of agricultural nursing.

Methodology

Design

This research applies a qualitative method. It employs descriptive phenomenology design to explore the meaning of the aforementioned concept of "quality of life" in a specific context. A phenomenological study describes the meaning of the lived experiences of a phenomenon from the perspective of individuals who have experienced it. It is essential to understand individuals' common or shared experiences of a phenomenon to develop a deeper understanding of its features (Creswell, 2007).

Participants

Purposive sampling technique, also known as purposive sample or judgmental or expert sample, was applied to enroll participants for this study. A formal letter requesting permission to conduct research was addressed to the farmer group leaders in Balet Baru Village of Sukowono, Jember. The names of older tobacco farmers living in Balet Baru Village of Sukowono, Jember were obtained from the farmer group leaders. To be considered for participation, potential informants had to be aged ≥ 60 years. They had to be able to communicate well in Indonesian, and have declared their willingness to participate. The number of participants was determined based on the number required to inform fully all important aspects of the phenomenon being studied and determined based on saturation of the data. In total, seven older tobacco farmers living in Balet Baru Village of Sukowono, Jember participated in this study. All of the participants were men, aged 60–65 years old, and had only elementary school education.

Data collection

The research was conducted in the Balet Baru Village of Sukowono, Jember, between November and December 2013. Participants were informed about the research objectives, procedures and their rights during the study. The interviews took place after informed consent was obtained from participants. This research received ethical approval from the Research Department of the University of Jember.

Data were collected through semi-structured in-depth interviews. Interview guides, field notes and a tape recorder were used to collect the data. Each interview was conducted once, face to face at each participant's home. Each lasted between 45 and 60 min. Each interview was started by asking participants a general question, such as: "How is your experience of doing your job as a

tobacco farmer?" It then moved on to more specific questions, such as What is your health like at present? How are you feeling these days? What type of activities do you engage in on a daily basis? How is your relationship with the people around you? What do you think about your work environment? What religious activities (if any) do you engage in?

Data analysis

A phenomenological data analysis includes the following steps: highlighting significant statements, sentences or quotes from the data (e.g. interview transcriptions) that provide an understanding of how the participants experienced the phenomenon; developing clusters of meaning from the significant statements into themes; writing a description of what the participants experienced (textural description) and how the participants experienced the phenomenon (structural description) based on the significant statements and themes; and writing a composite description that presents the "essence" of the phenomenon according to structural and textural descriptions (Creswell, 2007).

Findings

Six prevailing themes emerged. They describe the quality of life of older tobacco farmers, namely, physical condition, psychological condition, activity level, social relationships, environmental condition and worship activities. The results are described in Table I.

Physical condition

Physical condition was described by the participants in terms of perceived physical complaints, the cause of complaints, efforts to overcome the complaints and any efforts to maintain health and sleep quality. The physical complaints mentioned by the participants were: decreased health, energy and vitality. This included having cough or breathlessness, having pain in the feet and suffering from fever or a headache. Decreased energy and vitality was experienced as strength decline, fatigue and muscle stiffness. Following are examples of what some of the participants mentioned:

In the past, the body was still healthy, but now because of getting old, the body becomes less healthy. A common complaint is leg pain. If I sit too long, it becomes difficult for me to stand up. I usually feel tired or have stiffness when sorting tobacco (P1).

Table I Main themes and categories of the quality of life of elderly tobacco farmers in the perspective of agricultural nursing

Themes	Categories
Physical condition	Perceived physical complaints The cause of complaints Efforts to overcome the complaints Efforts to maintain health Sleep quality
Psychological condition	The problems experienced in tobacco farming How to cope with the problems
Activity level	Farming activities Non-farming activities
Social relationships	Relationships with family Relationships with community
Environmental condition	Ease of transportation Affordability of health care facilities The effects of tobacco storage
Worship activities	Safety Praying Following religious activities in the community

Sometimes I have a cough or breathlessness. I often experience fatigue and muscle pain (P3).

Suffering from common illness, sometimes I get a fever or a headache. When planting tobacco, I often get tired and have muscle stiffness problem (P4).

Participants perceived the impact of ageing as a decline in health and strength:

Now I am getting weak. When I was young, I was strong (P5).

During young age, the body is still healthy. If we are getting old, the health decreases (P3).

The number of hours required by tobacco farming and the techniques involved were also described as the causes of physical complaints. Participants mentioned that if someone gets used to tobacco farming, then there will be no problem:

I experience a lot of muscle aches. There is no effect of the plants, but I have to work from morning until 11:00 a.m. (on afternoon), and sometimes I still need to go back to the farm (P3).

In the case of health problems, if people are not accustomed to tobacco, there must be a risk of disease. When you get used to it, there will be no illness. There will be no problem (P5).

There were participants who said that physical complaints, such as respiratory problems, are not related to the effects of tobacco farming:

In my opinion, they may have respiratory symptoms from the beginning, so doing any job eventually will become a respiratory illness. For those who basically do not have the disease, although they do tobacco farming, they will be still healthy (P1).

Like people riding in a car, there are people who experience motion sickness but there are also people who do not experience motion sickness. Similarly, in tobacco farming, health is different for each person. People who live in the city despite not working tobacco farming, both men and women can be affected by shortness of breath (P2).

Attempts to deal with the complaints were described by participants in several ways, such as taking an energy drink, seeking health care, using traditional treatments, taking over-the-counter drugs and stopping smoking temporarily. According to participants, drinking energy drinks can increase their strength, and keep them awake when they have to work at night during the harvest season:

When planting tobacco, I often feel tired, so sometimes I drink energy drinks to enhance energy (P5).

I drink stamina booster to keep awake at night (P1).

Participants also use health care facilities, such as the Public Health Center (PHCs) and the midwives practice to check their conditions or to get an injection:

I usually go to the Public Health Center or midwife to check my condition (P4).

If there is a health problem, I go to midwife practice to get an injection (P7).

Buying over-the-counter drugs and using a traditional treatment such as *gua sha* or coining (such as traditional medicine or complementary alternative medicine) also become a method to overcome the complaints:

If there is a complaint, I go directly to the Public Health Center to get injection, or sometimes I do *gua sha* (P3).

That medicine is suitable for me. I used to buy over the counter drug (P3).

A participant attempted to deal with a cough by quitting smoking temporarily:

If I have a cough, I quit smoking. If my condition is getting better, I smoke continuously (P2).

Some participants reported their efforts to remain in good health by consuming adequate amounts of fluids and proper nutrition, as well as using self-protection devices. These include farmer hats and long sleeve clothes while farming:

Maintaining health is a must. When we are getting old, we have to drink a lot. I drink up to 16 glasses per day (P2).

During daytime, when I go to the farm, I bring a drink to keep strong. I also bring a packed lunch containing side dishes such as fish (P3).

If I go to the farm, I wear a farmer hat and long sleeve clothes (P3).

Physical condition was also described by participants in terms of sleep quality. Participants mentioned going to bed between 10 and 12 p.m. They reported sleeping between 3 and 4 h per night:

I start to sleep at 11:00 p.m., sometimes if I feel so tired, I fall asleep at 1 a.m., that is when I'm worried about something (P3).

If there is no activity in the night, I will sleep. During harvest season, I will sleep after I finished taking care of the tobacco. My bedtime is at 10:00 p.m., and then I wake up at 1:00-2:00 a.m. I do not feel sleepy (P7).

My bedtime is sometimes 3 hours. I can sleep but only for a while. I sleep at 10 p.m. and I wake up at 2:30 a.m. (P5).

Psychological condition

Participants described their psychological conditions in relation to tobacco farming and its related issues. Participants also mentioned how they coped with any troublesome situation. The problems faced in tobacco farming included: high costs involved in the activity, intensive maintenance and the impact of inappropriate weather. Participants said that the cost of farming tobacco is greater than other crops. Tobacco plants also require more treatment than other plants:

Planting tobacco costs money for each phase, including hoeing and ploughing. Tobacco requires more attention, 2 to 3 times than other plants (P1).

Sometimes there are pest problems. Tobacco farming requires 3 times more fertilizer (P4).

Inclement weather, such as rain during tobacco farming, was described by participants as having various impacts. These include rising costs, work difficulty, change of planting time, quality decline, harvest failure and decreased income:

For tobacco farmers, if the rain falls during hoeing stage, the land becomes flat again and the cost can increase. Tobacco planting this year is not good because of improper weather (P1).

If there is rain during tobacco farming, it becomes difficult to fertilize the plants (P2).

Tobacco harvest is not good now. The income is not as high as usual. We started to plant, but there is rain continuously this year (P6).

Planting tobacco is not always successful. Sometimes because of rain, plants die immediately (P4).

Participants described coping with the problems in various ways. Some participants assumed that inclement weather and crop failures are a common occurrence. They are used to the weather-induced losses. Some participants said that they could accept crop failures because the cause was the weather that was the God's will:

The loss in tobacco farming is common for me. Profit and loss are common things. I am used to losses due to weather. The weather is not good for now. There is continuous rain from May to September. That is an obstacle. I can accept it because the cause is the weather (P1).

It is a risk. I do not feel the burden because the farm is my own land and not rented. Although there is crop failure, it is not a problem (P4).

Failed harvest does not cause stress. Although it does not produce anything, it is not a problem. It is God's will, such as the weather (P6).

Motivation was perceived by participants as a factor that encourages them to continue farming tobacco even though many problems arise. The motivating factors include higher income from tobacco farming and providing employment opportunities:

I farm tobacco because it gives income doubled more than rice, but it also cost more than rice (P1).

I am used to crop failure. If I compare the profit and loss, I still get more profit (P5).

I cultivate tobacco because its income is higher than other plants. Farming tobacco can help people who do not have a job (P5).

One participant mentioned that the problems involved in tobacco farming were significant stressors. They deprived him of sleep and induced irritability:

When the harvest fails, it becomes difficult, I cannot sleep and become irritable because how much money and work have been spent (P3).

Activity level

Participants described activity level in two forms: farming activities and non-farming activities. Tobacco farming activities include: pre-harvest, harvesting and post-harvest activities. Pre-harvest activities consist of activities such as seedling and treatments. The activity during harvest was described by the participants as the busiest one. Participants said that after tobacco harvest they still go to the farm to trim the tobacco shoots after they have been harvested, followed by rice farming activities:

Compared to planting rice, planting tobacco is harder. Rice cultivation only needs seedlings until pulling, moving, and raising. Tobacco cultivation includes seedling, planting, and long maintenance. There is not even a day without working (P4).

The period which has many jobs is September which is the harvest time (P7).

After the harvest time, I still go to the farm. There are still tobacco shoots which need to be discarded to achieve good quality. The period of tobacco farming is finished, now planting rice (P3).

During tobacco farming, some participants need workers while others are self-employed without workers. Participants mentioned that tobacco farming activities require a heavy workload. Tobacco needs daily care to give a good result:

I have so many plants and I am not strong enough to work alone, so there must be help (P5).

I need a help in working. During a planting season, I need other people to help me, including for ploughing the soil. Planting tobacco requires more work (P6).

I work by myself. I am still active, from seedling until spreading, I do it by myself (P2).

We must work until the harvest time. If we leave the plant without care, it will not give a result (P7).

Participants said that they start working at 7 a.m. and end 11–12 a.m., then they go back again to the farm if there is something to do. During the harvest season, workload increases. This condition makes them continue working at night to get the job done:

I start working between 7:00 and 11:30 a.m. and go home at noon. I go back to the farm at 1:00 or 2:00 p.m. and go home at 4:00 p.m. (P2).

I start working at 7:00 a.m., and I go home at noon. If there is no problem, I go back to the farm at 1:00 p.m. (P7).

During harvest season, we work continuously from picking the plants until drying. We stop if the crop has been brought into the warehouse. Sorting is usually done at day and night (P1).

At harvest time, we work day and night. We take care of tobacco till night (P5).

Non-farming activities were described by participants as activities in the family and in the community. Activities in the family included: visiting children, watching television or taking a trip for recreation. Participants said that they are still actively participating in activities held by the community:

I live with my grandchildren. If there is a spare time, sometimes we go on vacation (P3).

If there is no activity in the community, I watch television at home. I am still actively participating in community gatherings. There are 2 meetings every week: Tuesday and Friday (P7).

Social relationships

As mentioned, social relationships were described by participants as relationships with family and relationships with the community. Relationships with family included earning support from children. This was described as follows:

My son is helping me now (P1).

Relationships with the community were conveyed by participants as involving an active participation on their part. These include taking part in the activities of farmer groups, Quran recitation and social gathering. Some participants also have a role as village officials and mosque administrators:

I am still active in farmer groups, Quran recitation, social gathering (P1).

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I participate in activities of farmer groups, such as how to become successful farmers. I am the village's official in the community (P3).

I am chairman for activity in mosque (P5).

Environmental conditions

Participants described the environmental conditions in terms of ease of transportation, affordability of health care facilities, the effects of tobacco storage and safety:

Transport in this area is easy. There is no barrier to go to a Public Health Center (P7).

I usually go alone on a motorcycle to the Public Health Center. It takes about ten minutes (P3).

There are no problems with environmental conditions. It is safe here (P5).

According to the participants, tobacco is stored in the warehouse or house during harvest season. The places where tobacco is stored have windows, so the light can enter the room. During the period of tobacco storage, the warehouse or house will smell of tobacco:

Tobacco shelters have windows which allow the light to come in (P3).

After sorting, tobacco is usually stored half a month at home (P6).

If we get out of the warehouse, we will smell of tobacco. If people come out from the tobacco warehouse, their body will smell of tobacco (P1).

Worship activities

Participants described worship activities in terms of praying and following religious activities in the community:

In the morning, I usually have a dawn prayer together with others (P2).

Midday is a break time. I go home, I take a bath, and I pray. After prayer, I will go back to the farm if there is nothing to do at home (P3).

Yes, I still actively participate in Quran recitation to strengthen relationship with neighbors (P5).

Motivation to perform worship activities is influenced by time management, faith and is unrelated to tobacco farming:

Everyone must be good at managing time because the work is endless. Because of faith, time to go to the mosque should not be disturbed (P1).

For me personally, worship activity has nothing to do with work. It depends only on faith. Sometimes there are people who have no job but also do not do prayer (P6).

There is a participant who has a belief to do good things in life:

While I am still alive, I want to do good things (P1).

Discussion

Participants reported health declines such as feeling less healthy, sometimes having a cough or feeling breathless, having pain in the feet and suffering from fever or a headache. Decreased energy and vitality was illustrated by participants as exemplified by strength decline, fatigue and muscle stiffness. Pain, discomfort, energy and fatigue are aspects of quality of life (World Health Organization (WHO), 1997). Health problems can affect the quality of life of farmers (Windon *et al.*, 2014). Participants perceived the impact of the ageing process on the decline in health and strength. The ageing process causes loss of muscle mass and strength (Keller and Engelhardt, 2014). Physical changes associated with ageing lead to a decrease in body reserves capacity and an increased risk of disease. Therefore, education about health promotion and health maintenance for the older is important (Saxon *et al.*, 2015).

Tobacco farming hours were also considered by the participants as the cause of physical complaints. Tobacco plants require intensive care. If it is not treated intensively, tobacco will be

attacked by pests, resulting in crop failure (Ahsan *et al.*, 2008). Working hours is a factor in the quality of life of farmers (Windon *et al.*, 2014). Heavy workload plays a role in decreasing energy (Carvalho Junior *et al.*, 2012). Agricultural health nurses play an important role promoting agricultural health (Lundvall and Olson, 2001). It is important for occupational health nurses to increase awareness in older farmers about the importance of achieving a balance of workload and physical ability.

Another factor mentioned as a source of physical problems was being unfamiliar with tobacco. Participants stated that someone will not have any health problem if they get used to tobacco. This result indicates that participants still do not have a proper understanding of the increased risk of tobacco farming impact on health. Farming tobacco may result in Green Tobacco Sickness (GTS) caused by the absorption of nicotine through the skin from contact with wet tobacco leaf (Ballard *et al.*, 1995). Exposure to tobacco leaves during drying and stacking processes may increase the risk of respiratory system damage (Osim *et al.*, 1998). Complaints of diseases are higher in tobacco farmers than non-tobacco farmers. The more often farmers engaged in tobacco farming, the more diseases they reported (Huong *et al.*, 2009). It is important to teach older farmers how to work safely and promote a safe workplace. Education that focuses on the special situation of older farmers can result in greater awareness of the dangers that can be encountered by increasing age (Nilsson *et al.*, 2010).

Some participants maintain their health by adequate fluid intake and nutrition and using self-protection devices during farming, such as long sleeve clothes and a farmer hat. GTS is a common problem among tobacco workers that can be prevented by avoiding work on wet tobacco or by using protective clothing (Ballard *et al.*, 1995). Some of the dangers involved in agricultural work include UV radiation, exposure to pesticides and dust (Pérès *et al.*, 2012). Health education by occupational health nurses on the importance of using personal protective equipment during tobacco farming is important to reduce the effects of tobacco farming on health.

Participants' efforts in dealing with physical complaints described in several ways such as the aforementioned use of energy drinks, seeking health care, using traditional treatment, consuming over-the-counter drugs and stopping smoking temporarily. Older in India reported the use of home remedies for minor ailments such as a cough, cold and injury. They will go to local Primary Health Centre (PHC) if the condition is not relieved (Dongre and Deshmukh, 2012). Rural occupational health nurses are in an optimal position to improve the mental and physical health of older farmers (Lizer and Petrea, 2007). Occupational health services are comprehensive, including control of hazardous factors in the work environment, promotion of work ability and promotion of workers' general health and healthy lifestyles (Guidotti, 2011).

Physical condition was also described by participants in terms of sleep quality. Bedtime of participants was between 10:00 and 12:00 p.m., and the sleep duration was 3–4 h. During the tobacco season, they will sleep if they have finished taking care of tobacco. A participant reported difficulty to fall asleep when having worries because of tobacco. Rest and sleep are included in the aspect of physical health domain of quality of life (World Health Organization (WHO), 1997). Along with the ageing process, the older sleep patterns tend to change (Susanto *et al.*, 2017). The older feel that ageing makes them difficult to fall asleep and become often awakened (Susanto *et al.*, 2016). They feel their sleep hours reduced compared to when they are young (Dugdale, 2012). Bedtime is a factor related to the quality of life of farmers. Almost 20 percent of farmers were dissatisfied with the sleep hours during the busy season (Windon *et al.*, 2014). Occupational health efforts should pay attention to sleep and rest of older tobacco farmers by providing health information about the importance of the balance between rest and work.

The problem faced by participants in tobacco farming included the cost of farming tobacco, which is greater than for other crops. Tobacco also requires more intensive care than other plants. The risks encountered in tobacco farming include low price during harvest, high maintenance cost, pest risk and low quality due to weather. Tobacco plants need intensive treatment and the leaves should always be observed because bugs will quickly develop and damage tobacco leaves (Ahsan *et al.*, 2008). Excessive workload and agricultural hassles can lead to increased stress on farmers (Ramesh and Madhavi, 2009).

Another problem in tobacco farming mentioned by participants was an inclement weather that has impacts such as increased costs, work difficulty, change of cultivating time, decreased quality, crop failure and declined income. Weather and financial situation can lead to increased stress on farmers (Ramesh and Madhavi, 2009). Stress can affect the psychological well-being of farmers (Ang, 2010).

Participants reported a variety of ways to cope with the problems in tobacco farming. One participant mentioned that the problem of crop failure can cause considerable stress. On the other hand, other participants described weather changes and crop failures as common, and they are used to the weather-induced losses. Participants stated that crop failure due to weather is God's will so they can accept it.

Faith provides great support for a person to feel that the world is understandable and manageable, and life is meaningful. This condition tends to generate positive emotions and help to overcome negative emotions. When people are getting older, they will become better in managing emotions (Kimble and McFadden, 2003). A higher level of spiritual belief is associated with better mental health quality among the older. Older farmers with a strong spiritual belief will experience low-stress level compared to older with a less strong spiritual belief (Udhayakumar and Ilango, 2012). Addressing the mental health of agricultural workers is important to provide comprehensive health care (Ward, 2010).

Motivation is a factor that encourages participants to keep farming tobacco even though they may encounter many problems. Factors that motivate farming tobacco were the income of tobacco farming, which is higher than other crops and can provide a job for others. The main reason for continuing farming tobacco is that there is no other choice, higher profit than other jobs, better prospects and the easy availability of seeds. Another reason is the age, a habit of planting tobacco and not having other skills. Farming tobacco remains the main choice because the tradition of tobacco cultivation has been passed on from generation to generation (Ahsan *et al.*, 2008).

Activities during the harvest season were described by participants as the busiest ones. One of the domains relating to quality of life is the level of freedom that includes mobility, daily activities and work capacity (World Health Organization (WHO), 1997). In this study, participants were still actively farming tobacco despite entering old age. Some participants need extra workers while others work alone without help. A significant decrease in energy levels was found at the end of the harvest compared to pre-harvest (Carvalho Junior *et al.*, 2012).

Participants reported that tobacco farming activities require a heavy workload. Tobacco needs daily care to give a good result. During the harvest season, workload increases; this causes farmers to continue working at night to finish the jobs. Older farmers are found working for long hours in many agricultural tasks compared to other work groups (Lizer and Petrea, 2007). The physical limitations caused by the ageing process should be addressed in prevention programs on agriculture (Xiang *et al.*, 1999). Occupational health programs are essential to achieve a workload balance of physical abilities and limitations in older farmers.

Non-farming activities described by participants included family activities and activities in the community. Participants stated that they are still actively participating in community activities such as Quran recitation and social gathering. Older people who engage in social life and are economically independent report better physical health than those who are not involved in social life and are not economically independent (Dongre and Deshmukh, 2012). Living in rural areas can provide benefits for the older such as having well-developed social networks, more frequent social interactions and higher integration in social networks to provide greater informal and mutual social support (Evans, 2009).

Participants described social relationships in terms of relationships with family and community. A participant reported receiving help and support from his children in tobacco farming. Most of farmers are satisfied with their social activities and the emotional support they get from family members (Windon *et al.*, 2014). Family assistance has a positive effect on the quality of life of older farmers (Purnawanto, 2014). Family and social networks have an important role in the physical and mental health of older in the countryside. Relationships with families are a predictor of the quality of life of older, so it is important for families to provide both physical and psychological support (Yu and Lin, 2012).

Social relationships with the community were described by participants through active participation in community activities such as farmer groups, Quran recitation and social gathering. The determinants of older farmers' physical health are work status, not being neglected by family and involvement in social activities (Dongre and Deshmukh, 2012). Social participation can produce a positive perception of the quality of life. Participation in group activities is important to sustain social life (Yu and Lin, 2012). The older farmers are encouraged to remain socially engaged as it can provide support to cope with the problems (Tamher and Noorkasiani, 2009).

The environmental conditions were described by participants in terms of ease of transportation, affordability of health care facilities and safety. The environmental aspect of quality of life includes safety and security, accessibility and quality of health care, home environment, transport and physical environments such as pollution, traffic and climate (World Health Organization (WHO), 1997). Participants mentioned that the warehouse or house becomes a place for tobacco storage during the harvest season. Even though it is provided with windows, it will smell of tobacco during the storage period. Housing conditions and the ability to access public facilities have a positive effect on the quality of life of older farmers (Purnawanto, 2014). In addition to the long-term effects of exposure to agriculture, older farmers also gain advantages for living in a rural environment such as greater security and more spacious accommodation (Pérès *et al.*, 2012).

Participants described worship activities in terms of praying and following religious activities in the community such as Quran recitation. Praying can help overcome negative feelings. In rural areas, religious activities can gather people and make them more socially active (Dongre and Deshmukh, 2012). In old age, there is a decrease in physical, psychological and social conditions. In this phase, the older people contemplate the essence of life more intensively and try to get closer to God (Tamher and Noorkasiani, 2009). Religion and spirituality have a significant influence on the quality of life of older (Moon and Kim Do, 2013). Spirituality can help develop healthy behaviors and lifestyle, find psychosocial support and overcome life problems and negative emotions (Udhayakumar and Ilango, 2012). Occupational health nurses can use religious approaches through religious activities in the community to optimize quality of life of older farmers in rural areas.

Implications for community health nursing

Optimizing the role of agricultural health nursing is required to improve the health status of older farmers, increase farmer productivity and improve the health of workplace environment. Agricultural health nurses can provide health education on the effects of tobacco farming on health, the importance of using personal protective equipment during tobacco farming, the importance of achieving a balance between workload and physical ability, the importance of rest and work balance, and the importance of stress management so that older farmers can avoid occupational health problems that can affect their quality of life.

Study limitations

This study has limitations, such as the use of phenomenology that is limited to participants' "experiences and descriptions based on the researchers'" understanding and definition of the phenomenon. Another limitation is that research was conducted only in one region in East Java so that the results may not be generalized or applied in other areas of the world. Further research should consider the use of a mixed method research which involves a qualitative and quantitative approach to gain a deeper understanding of the quality of life of older tobacco farmers.

Conclusion

The six themes emerged from this study were: physical condition, psychological condition, activity level, social relationships, environmental conditions and worship activities. Older tobacco farmers reported decreased health and decreased energy and vitality. Participants were still eagerly participating in social activities in the community, despite their age. Negative environmental factor are included tobacco storage during the harvest which made the warehouse or house will smell tobacco. While, the positive ones of environmental factors that

contribute to overall well-being was also mentioned. They included: ease of transport, affordability of health care and safe environment. Worship activities were also considered to have a positive influence on the overall well-being.

References

Ahsan, A., Fajri, P.A., Nuzul, B., Wiyono, N.H. and Widodo, P.T. (2008), "The condition of tobacco farmers in Indonesia: case studies in three tobacco-producing areas", Project: Tobacco Farming in Indonesia, doi:10.13140/RG.2.1.4439.8487.

Ang, H.B. (2010), "Occupational stress among the New Zealand farmers – a review", *Labour, Employment and Work in New Zealand*, November, available at: <https://ojs.victoria.ac.nz/LEW/article/view/1708> (accessed August 28, 2018).

Ballard, T., Ehlers, J., Freund, E., Auslander, M., Brandt, V. and Halperin, W. (1995), "Green tobacco sickness: occupational nicotine poisoning in tobacco workers", *Archives of Environmental & Occupational Health*, Vol. 50 No. 5, pp. 384-9, available at: <http://doi.org/10.1080/00039896.1995.9935972>

Carvalho Junior, L.C., Ramos, E.M., Toledo, A.C., Ceccato, A.D., Macchione, M., Braga, A.L. and Ramos, D. (2012), "Assessment of health-related quality of life of sugarcane cutters in the pre-harvest and harvest periods", *Revista de Saúde Pública*, Vol. 4 No. 6, pp. 1058-65.

Creswell, J.W. (2007), *Qualitative Inquiry & Research Design Choosing Among Five Approaches*, 2nd ed., Sage Publication, CA.

Dongre, A.R. and Deshmukh, P.R. (2012), "Social determinants of quality of older life in a rural setting of India", *Indian Journal of Palliative Care*, Vol. 18 No. 3, pp. 181-9, available at: <http://doi.org/10.4103/0973-1075.105688>

Dugdale, D.C. (2012), "Ageing changes in sleep", available at: www.nlm.nih.gov/medlineplus/ency/article/004018.htm

Evans, R.J. (2009), "A comparison of rural and urban older adults in Iowa on specific markers of successful ageing", *Journal of Gerontological Social Work*, Vol. 52 No. 4, pp. 423-38, available at: <http://doi.org/10.1080/01634370802609197>

Guidotti, T.L. (2011), *Global Occupational Health*, Oxford University Press, New York, NY.

Hernandez-Peck, M.C. (2001), "Older farmers: factors affecting their health and safety", available at: http://nasdonline.org/static_content/documents/1816/d001760.pdf

Huong, N.T., Minh, H.V., Giang, K.B. and Lam, N.T. (2009), *Impact of Tobacco Growing on The Livelihood and Health of Tobacco Farmers and The Environment: A Preliminary Study in Vietnam*, SEACTA: Southeast Asia Tobacco Control Alliance, available at: https://seatca.org/dmdocuments/2_impact_of_tobacco_growing_vietnam.pdf

Indonesia Directorate General of Plantation (2014), "Indonesian plantation statistics of tobacco commodities 2013-2015", Directorate General of Estate Crops, Jakarta, available at: <http://ditjenbun.pertanian.go.id/tinymcepuk/gambar/file/statistik/2015/TEBBAKAU%202013%20-2015.pdf>

Intani, A.C. (2013), "The relation of workload and stress at older farmers in Tobacco Farmer Groups Sukowono Subdistrict Jember District, East Java", University of Jember, Jember.

Keller, K. and Engelhardt, M. (2014), "Strength and muscle mass loss with ageing process: age and strength loss", *Muscles Ligaments Tendons Journal*, Vol. 3 No. 4, pp. 346-50.

Kimble, M.A. and McFadden, S.H. (2003), *Ageing, Spirituality, and Religion: A Handbook*, Vol. 2, Augsburg Publisher, Minneapolis, MN.

Lizer, S.K. and Petrea, R.E. (2007), "Health and safety needs of older farmers – part I: work habits and health status", *American Association of Occupational Health Nurses Journal*, Vol. 55 No. 12, pp. 485-91.

Lundvall, A.M. and Olson, D.K. (2001), "Agricultural health nurses: job analysis of functions and competencies", *American Association of Occupational Health Nursing Journal*, Vol. 49 No. 7, pp. 336-46.

Moon, Y.S. and Kim Do, H. (2013), "Association between religiosity/spirituality and quality of life or depression among living-alone older in a South Korean City", *Asia-Pacific Psychiatry*, Vol. 5 No. 4, pp. 293-300, available at: <http://doi.org/10.1111/appy.12025>

Nilsson, K., Pinzke, S. and Lundqvist, P. (2010), "Occupational injuries to senior farmers in Sweden", *Journal of Agricultural Safety and Health*, Vol. 16 No. 1, pp. 19-29.

Osim, E.E., Musabayane, C.T. and Mufunda, J. (1998), "Lung function of Zimbabwean farm workers exposed to flue curing and stacking of tobacco leaves", *South African Medical Journal*, Vol. 88 No. 9, pp. 1127-31.

Parry, J., Barnes, H., Lindsey, R. and Taylor, R. (2005), *Farmers, Farm Workers and Work-Related Stress*, HSE Books, Norwich, CT, available at: www.hse.gov.uk/research/rpdf/tr362.pdf

Pèrès *et al.* (2012), "Health and aging in elderly farmers: the AMI cohort", *BMC Public Health*, Vol. 12 No. 558.

Purnawanto, G. (2014), *Factors Affecting the Quality of Life of Older Male Farmers in Purwoharjo Village, Purwoharjo District, Banyuwangi Regency*, University of Jember, Jember.

Ramesh, A.S. and Madhavi, C. (2009), "Occupational stress among farming people", *Journal of Agricultural Sciences*, Vol. 4 No. 3, pp. 115-25, available at: <http://doi.org/10.4038/jas.v4i3.1650>

Saxon, S.V., Ette, M.J. and Perkins, E.A. (2015), *Physical Change & Ageing: A Guide for Helping Profession*, 6th ed., Springer Publishing Company, New York, NY.

Susanto, T., Purwandari, R. and Wuryaningsih, E.W. (2016), "Model Kesehatan Keselamatan Kerja Berbasis Agricultural Nursing: Studi Analisis Masalah Kesehatan Petani (Occupational health nursing model-based agricultural nursing: a study analyzes of farmers health problem)", *Jurnal Ners*, Vol. 11 No. 1, pp. 45-50.

Susanto, T., Purwandari, R. and Wuri Wuryaningsih, E. (2017), "Prevalence and associated factors of health problems among Indonesian farmers", *Clinical Nursing Research*, Vol. 4, pp. 31-7, available at: <http://dx.doi.org/10.1016/j.cnre.2017.03.008>

Tamher, S. and Noorkasiani (2009), *Kesehatan Usia lanjut dengan pendekatan asuhan keperawatan*, Salemba Medika, Jakarta.

Thornbory, G. (2014), *Contemporary Occupational Health Nursing: A Guide for Practitioners*, Routledge, New York, NY.

Udhayakumar, P. and Ilango, P. (2012), "Spirituality and mental health among the older practising spirituality", *Journal of Research, Extension and Development*, Vol. 1 No. 2, pp. 8-13.

Ward, L.S. (2010), "Psychosocial stress and health-related quality of life for Latino migrant farmworkers", *Southern Online Journal of Nursing Research*, Vol. 10 No. 1.

Winton, S.R., Jepsen, S.D. and Scheer, S.D. (2014), "Identifying the factors affecting Ohio farmers quality of life", *Journal of the NACAA*, Vol. 7 No. 2, pp. 40-5.

World Health Organization (WHO) (1997), "WHOQOL: measuring quality of life", available at: <http://apps.who.int/iris/handle/10665/63482>

Xiang, H., Stallones, L. and Chiu, Y. (1999), "Nonfatal agricultural injuries among Colorado older male farmers", *Journal of Ageing and Health*, Vol. 11 No. 1, pp. 65-78.

Yu, C.W. and Lin, J.P. (2012), "Social networking and the quality of life of retired older farmers", available at: www.mostlyreadingya.com/read-file/social-networking-and-the-quality-of-life-of-retired-elderly-farmers-pdf-2195275/

Further reading

Gill, P., Stewart, K., Treasure, E. and Chadwick, B. (2008), "Methods of data collection in qualitative research: interviews and focus groups", *British Dental Journal*, Vol. 204 No. 6, pp. 291-5, available at: <http://doi.org/doi:10.1038/bdj.2008.192>

Werner, M.A. and Olson, D.K. (1993), "Identifying sources of disease in agriculture: a role for occupational health nurses", *American Association of Occupational Health Nurses Journal*, Vol. 41 No. 10, pp. 481-90.

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