



The Well-Being of New Female Farmers in Japan: A Grounded Theory

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ABSTRACT

Background: New female farmers have difficulty in maintaining their health and adjusting to new lifestyles. There have been few to no studies on the well-being of new female farmers. Removal of all barriers to health equity, such as gender discrimination, is paramount to achieving health and well-being for all. **Purpose:** In this study, we aimed to clarify the well-being of new female farmers in Japan. **Methods:** Twenty-one new female farmers aged 25–45 years were included. Data were collected through semi-structured interviews and analyzed using a grounded theory approach. **Results:** The well-being of the new female farmers was composed of the three concepts representing harmony: “mind and body becoming like that of a farmer,” “building a mutual relationship with the help of predecessors,” and “utilizing nature to protect and convey life.” These concepts were closely linked, and “living proudly as a farmer in the embrace of nature” was derived as a theme of the well-being of new female farmers. **Conclusion:** New female farmers want to be recognized as farmers by both male farmers and society. These farmers also were attracted to farming by the blessings of nature and the feeling of pride in themselves. Thus, to enhance the well-being of female farmers, it is essential to provide opportunities for them to be acknowledged as farmers and to take pride in their accomplishments alongside their peers.

KEYWORDS

Farmers, Female, Grounded theory, Japan, Well-being

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1. BACKGROUND

The agricultural, forestry, and fishing sectors employ approximately 800 million people worldwide, with women constituting 37% of this workforce ([Food and Agriculture Organization](#), 2022). In Japan, female farmers account for 40% of the total, and despite a declining trend, they have historically played a vital role in supporting

agriculture and local activities ([Ministry of Agriculture, Forestry and Fisheries](#), 2015). Some are actively engaged in processing agricultural products or promoting their sales, and the Ministry of Agriculture, Forestry, and Fisheries of Japan is continuously promoting the active participation of female farmers ([Ministry of Agriculture, Forestry and Fisheries](#), 2023).

Female farmers play a vital role in safeguarding local industries and supporting people's food and livelihood through production.

However, several issues concerning the health and labor of female farmers persist. Reports have highlighted pesticide exposure affecting renal function (Martin-Reina et al., 2021) and severe injuries during agricultural work due to factors such as fatigue and stress (Mental Health Foundation, 2018). Female farmers are more prone to depression than their male counterparts, with younger farmers facing challenges in building relationships in a new community (The Royal Agricultural Benevolent Institution, 2021). Moreover, women face heavy labor burdens owing to their unpaid housework responsibilities despite having low wages (Food and Agriculture Organization, 2011; Glazebrook et al, 2020; Ministry of Agriculture, Forestry and Fisheries, 2020). These results emphasize the substantial impact of labor and lifestyle of female farmers on their health.

For farmers, the concept of "health" refers to their ability to pursue their desires, and they may consider themselves healthy even in the presence of illness or disability as specific conditions are fulfilled (Rawolle et

al., 2016). Farmers derive a sense of well-being and satisfaction from working closely with nature and living organisms (Kallioniemi et al., 2012; Mental Health Foundation, 2018). Female farmers facing the challenges of agricultural life may perceive their well-being as a form of health, finding fulfillment and joy in their work and lifestyle. Kawarazuka et al. (2022) recommended that female farmers should not be considered as passive victims but rather that we should analyze how they demonstrate their independence and support their abilities. Clarifying the well-being of female farmers is important, as it shifts the focus to their active aspects, allowing the examination of support mechanisms that enable them to present their abilities and maintain a healthy lifestyle.

New female farmers who enter the field owing to marriage or starting a business need to become accustomed to farming practices and living on the land. As aforementioned, the work and lifestyle of female farmers affect their health. However, the well-being of new female farmers remains unclear. Clarifying the well-being of these individuals is important for promoting their active participation in farming and contributing to gender equality, aligning

with Development Goal 5 of the SDGs (United Nations, 2015) and supporting the active participation of women in society. As articulated in the Essential Public Health Services (Centers for Disease Control and Prevention, 2020), the removal of all barriers to health equity, including gender discrimination, is paramount to achieving health and well-being for all.

To our knowledge, no similar studies have been conducted on this specific population, and this research question is of great importance. Therefore, we aimed to clarify and describe the well-being of new female farmers in Japan. We referred to the happiness theory model proposed by Smith (1983) within the concept of health in nursing. Considering the framework presented in this theory that individuals express their maximum self-actualization and potential abilities to enhance their quality of life, we provided the following definition for well-being, which includes the subjective meaning of living better than oneself: "a state of peace for a person that is found by repeatedly interacting with the natural environment, work, and people, and seeking to live better while seeking harmony."

2. METHODS

Design

The well-being of new female farmers, as clarified in this study, is a phenomenon that emerges through interpretations of meaning in interactions between individuals living in the community and the surrounding environment, such as nature or labor. We sought to clarify this phenomenon by applying a grounded theory approach (Glaser & Strauss, 1978) based on symbolic interaction theory (Blumer, 1969). We used this research method to clarify the characteristics and mutual relationships of the concepts that constitute the well-being of new female farmers and to enable an understanding of their lifestyles and health based on the experiences of stakeholders.

Participants and Setting

Theoretical sampling was conducted as follows: First, we interviewed women who were referred to us by a municipal public health nurse and who had entered farming through marriage. Then, we conducted interviews with women who changed jobs with their husbands and started farming, and we then conducted a comparative study. Furthermore, we conducted comparative analyses based on the farming type, years of farming, and

family composition, involving data collection from farming-related magazines and websites, contacting individuals, and conducting interviews. We conducted a comparative study by region by interviewing female farmers living in regions where farming could be conducted year-round and in rural villages. For family composition, we interviewed female farmers in husband-wife, single-person, and three-generation households.

We asked 27 people to participate in the study, with 21 consenting to participate and undergo interviews. The study achieved theoretical saturation after the 21st interview, where no new concepts emerged, indicating a comprehensive understanding of the well-being of new female farmers.

The research participants were women who started farming between 25 and 45 years of age, when they were in the active stages of working socially and raising children. We did not consider the type of farming, age at initiation of farming (among those aged 25–45 years), years of farming, and place of residence. This is because theoretical sampling allows for the collection of data from different situations and individuals as well as from diverse locations, which brings about a focus on new ideas ([Holloway & Wheeler, 2002](#)).

Ethical consideration

Municipal public health nurses and farming personnel who were asked to refer to the research participants were given verbal and written explanations of the research overview and the assurance of anonymity. After receiving a referral from a person who consented to participate in the research, we provided verbal and written explanations to the research participants regarding aspects, such as the research overview, assurance of anonymity, data handling, and data disposal, and asked them to sign a consent form. We guaranteed the participants their free will to participate in the research and explained that there would be no disadvantages even if they withdrew their participation. This study was approved by our university's Ethics Committee (details blinded for peer review).

Data collection

Data were collected from 2017 to 2019 through semi-structured interviews. The interviews were conducted once per person for an average duration of 93 min. Interviews were conducted to ensure the privacy of participants' homes, workplaces, and public conference rooms. During the interviews, we asked questions, such as, "What do you do in your daily life that makes

you feel like you can be yourself?,” “With what kinds of people do you interact or have exchanges?,” “What types of interactions or exchanges were involved?,” and “What is the most important in your daily life?” While proceeding with theoretical sampling, we conducted interviews with questions such as “How do you maintain your own well-being while fulfilling your roles as a mother, wife, and daughter-in-law?” and “How do you continue to farm and maintain your well-being despite changes in nature such as weather and natural disasters?”

Data analysis

The recorded interviews were transcribed verbatim and repeatedly read. Analysts began by coding each event in their data into as many analytical categories as possible (Glaser and Strauss, 1978). Attention was devoted to understanding the context of each event, capturing its semantic content. To generate concepts, all intercepts were assigned names that represented their semantic content. The generated concepts were constantly returned to the data to check whether they represented semantic content. When increasing the level of conceptual abstraction, we returned to the data to determine the appropriateness and

generated key concepts for constructing a theory. We constantly repeated comparisons between data and concepts, as well as between concepts, checked the suitability of the concepts for representing the phenomena, and posed analytical questions with the aim of generating new concepts and constructing a theory. We generated a theme that interlinked the key concepts, considering their distinctive attributes and the interrelationships among them, and created a storyline to explain the theory.

Trustworthiness

To ensure reliability, a record of analytical decisions was kept throughout the entire research process to trace the research process. Furthermore, discussions were conducted with researchers with experience in qualitative research to repeatedly examine whether the concepts and results generated were consistent with the data. We also verified whether the results reflected the well-being of new female farmers by explaining the results of the analysis face-to-face to two people, sending an overview of the results by mail to 10 people, and confirming them with members by telephone or email. This was because face-to-face explanations were not possible

owing to the spread of coronavirus disease 2019. A consensus on these results was obtained through confirmation by the members.

3. RESULTS

Twenty-one participants (mean age, 34.5 years) were included. The number of years of farming ranged from <1 to 20 years (mean, 8 years). Production activities included field farming, rice farming, citrus farming, dairy farming, poultry farming, and sheep farming. Family composition varied, with four married couples, seven living with their children, eight living with their husbands' parents or grandparents along with their children, and two living alone.

The analysis results showed that the well-being of new female farmers comprised three main concepts representing harmonies: "mind and body becoming like that of a farmer," which represents harmony with agricultural life; "building a mutual relationship with the help of predecessors," which represents harmony with local people; and "utilizing nature to protect and convey life," which represents harmony with nature. The results showed that "living proudly as a farmer in the embrace of nature" was derived as a theme that connects these main concepts and expresses the well-being of new female farmers (Figure 1).

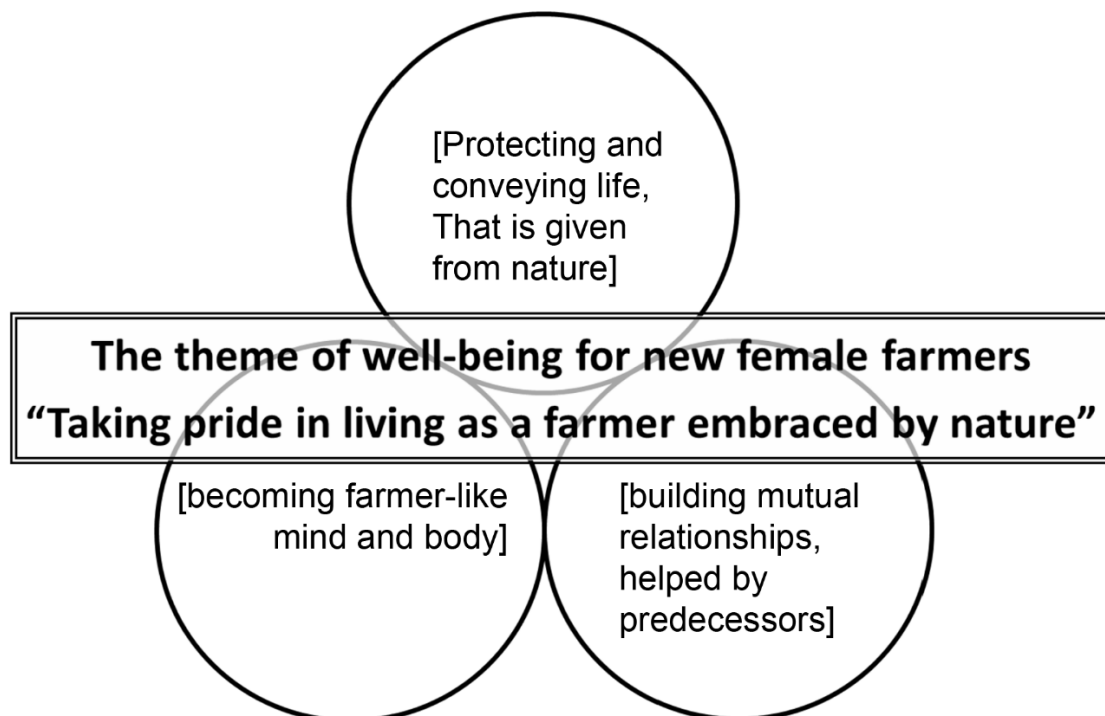


Figure 1. Conceptual framework well-being of new female farmers

As a new female farmer started farming in a new location after getting married or changing jobs, she learned about farming methods from the family she lived with or the local people. Her daily efforts were dedicated to adapting and harmonizing with the farming life. Additionally, to accept herself, the new female farmer made efforts to understand the local people and form relationships of mutual support to harmonize with them. Striving to harmonize with her new lifestyle, region, and people, while protecting the growth of crops and living organisms, the new female farmer positioned herself within nature and felt firsthand the blessings that nature provided for both herself and other organisms. These experiences conveyed the importance of food and life through farming, and she worked with colleagues to spread the appeal of farming by making innovations and with the wish of being recognized as a farmer herself, acting in harmony with nature. These three harmonies were closely related, and for new female farmers, the sense of awe in living in harmony with nature, pride in farming as a form of work and way of life, and the discovery of what they could do resulted in “living proudly as a farmer in the embrace of nature” as a form of well-being.

Mind and body becoming like that of a farmer

The new female farmer used living organisms as a source of her livelihood, sharing work, clothing, food, and shelter with her family. She worked hard to create an integrated lifestyle with no boundaries between agriculture and daily life. Putting her own rest at a lower priority, she prioritized the cycle in which crops and living organisms were growing and being shipped, and she maintained her livelihood by incorporating housework and child-rearing into that cycle.

“The summers are incredibly busy. Harvesting in the morning, feeding the children, and sending them to nursery school all condense the entire day considerably. My sleep times are short too [...] I feel like I’m always playing catch-up with time.” (F)

The new female farmer recognized the limits of farming, childcare, and household responsibilities independently. Realizing the importance of not pursuing perfection in housework or childcare, she understood the boundaries of her capabilities. This awareness allowed her to ease the burden on herself, and she acquired techniques to adapt to her own lifestyle.

“When I’m working, I thought that both housework and child-rearing was impossible by myself [...] My children surprisingly like even simple meals. I thought that knowing where to give up was key.” (P)

When farming became her vocation, she adapted her body to the daily routine of tasks and found joy in experimenting and generating ideas on her own. With increasing responsibilities from her family, she developed the ability to assert herself more, experiencing personal growth and change as a result.

“I had more work, and I also had more say. At first, nobody took my opinions into account, but once I started working, I was able to have my opinions heard a bit.” (E)

The new female farmer wanted to be recognized by both males and females and be independent, moving away from women in Japanese rural society who were traditionally hidden in the shadow of their husbands.

“Many farmers’ wives are hidden in the shadow of their husbands. Women aspire to be acknowledged as autonomous individuals rather than being perceived solely as women lacking the same rights as men. Rather than being seen as the “wife,” I want to be seen in parallel.” (J)

These results showed that “mind and body becoming like that of a farmer” signifies the new female farmer’s lifestyle and the formation of her identity as a farmer, encompassing both her mindset and physical adaptation. This concept encapsulates her harmonious integration into the farming way of life.

Building a mutual relationship with help of predecessors

The new female farmer sought to have her farming and living in a new area accepted by the people originally living in the region by taking it upon herself to incorporate herself among the local people, while assuaging their suspicions.

“I also participated in the neighborhood association’s cleaning activities. At first, I think they thought, “who are these people?” As I gradually met them and talked to them, they began to accept me.”

(Q)

Through participation in local festivals and meetings among farmers, the new female farmer, who was not accustomed to her daily life, was watched over by the locals, who began to care for her, and these relationships were gratefully accepted.

“If I showed up at local events, then people really took care of me. Couples

from the same region taught us about the fields and cooking. They would bring me a share of their meals.” (G)

To be accepted by others, the new female farmer explored the unspoken rules and ethos of the local people, while understanding the customs and agricultural life of the region to build relationships.

“The speed at which information travels in the countryside is extremely fast. So, I would show up to people to people who I think would know if I asked in order to get a sense of the distance between people. Rumors shouldn’t be let them pass.” (O)

In the life of a farmer, it is easy for the surrounding people to see the crops and animals being raised and to see each other’s lives. The new female farmer sometimes felt seen and constrained by the surrounding people, but once she understood through her daily interactions that she was being watched over by the locals, she began to feel that this region was her home.

“People would always call out to me, and there was a time when I felt a bit depressed. But once I realized that it was just casual everyday conversation that was the same as greeting someone, I would also just casually say things like; by the way, there’s a sale at the supermarket

today.” I felt that they were watching over me.” (P)

These results showed that “building a mutual relationship with help of predecessors” symbolized harmony in interpersonal relationships. The new female farmer, in the context of the relationships that she carved out herself while farming, formed relationships of mutual concern and was supported by her seniors in farming and life in the region.

Utilizing nature to protect and convey life

The new female farmer kept an eye on her crops and living organisms, vital for her livelihood, ensuring their healthy growth. She honed her five senses to promptly detect signals from these living entities.

“At first, I thought the cows were just sleeping, but it turned out that they weren’t feeling well. I didn’t understand any of that at all. It took a long time to learn things that could be understood through years of experience.” (E)

The new female farmer considered casual changes in the seasons that she felt while working on the farm as a gift, and she felt that she was being healed and kept alive by the environment.

“For every season, the young leaves come out in the spring, and just working in the pleasant breeze makes me happy.” (G)

At the mercy of natural disasters, a new female farmer felt that she could survive by receiving the blessings of nature. She held deep respect for nature and took measures to safeguard life, ensuring the well-being of herself, her family, and the health of living organisms and corps.

“I’m at the mercy of nature, but it’s also due to the grace of nature, so both the good and bad come from nature. Even if it’s humans who cut the plants, we are just doing what can be done in nature.” (R)

“I think of the cows as family and treat them with care. All we can do is to support the cows. I want to work hard so that I can notice changes in their physical condition.” (K)

She profoundly experienced the daily rhythm of residing in nature through her agricultural activities. The new female farmer used the farm as a stage to showcase her efforts to her own children and youngsters involved in farming through their farming experiences and proudly conveyed how they were kept alive by the lives of living organisms.

“We’re poultry farmers, and when we eat a chicken that has finished laying eggs, I

would say, “Be sure to eat it while being thankful for it laying eggs,” and then the children would understand, saying, ‘eating all of it is a way of saying thank you.’” (L)

“I felt proud of myself by telling children about my work through farming experiences.” (K)

Furthermore, she wanted to spread the potential and attractions of farming, including a lifestyle that went beyond just production, and envisioned her future by expressing her wish to contribute to the local community that welcomed her.

“Women are suited to agriculture. I grow a variety of vegetables, make pickles, and make miso. It is possible to create opportunities for women.” (D)

“I hope that people who want to live in this region, where depopulation is occurring, would come out and we can protect this village together [...] I want to bring in immigrants.” (G)

These results showed that “utilizing nature to protect and convey life” symbolized the new female farmer’s reverence for the gifts of nature in her daily efforts to protect and foster the lives of living organisms. She acted in a way that allowed her to transmit these values to

children and others, thereby attaining harmony with nature.

4. Discussion

The well-being of new female farmers exhibits three distinct characteristics: First, they were able to understand and help the local people while engaging in farming and living on the new land. The new female farmers understood each other's lives through the lens of their farms, leading to a sense of constant visibility. Communities in rural areas have a strong sense of solidarity (Newton, 2016) and are less likely to keep secrets from one another (Gessert et al., 2015). In this study, the participants initially felt stressed owing to the lack of privacy inherent in close rural relationships. However, female farmers participated in local events, sought to be understood by others, and fostered relationships based on mutual assistance. This shift in perspective, from being observed to being supported by the local community, contributed to building relationships grounded in understanding. Rose et al. (2023), in their study, identified loneliness and isolation as influencing factors affecting the well-being of young Irish farmers. Furthermore, Li et al. (2022) reported that social capital greatly promotes farmers' subjective well-being. Addressing

social isolation is an important issue for women in rural areas (Mental Health Foundation, 2018). It has been suggested that fostering social capital on a daily basis, so that new female farmers become familiar with the region, would lead to women's well-being.

Second, new female farmers wanted to be recognized as farmers by both male farmers and society. They navigated their daily lives by adapting in ways that did not demand perfection, recognizing the challenges posed by their overloaded roles encompassing labor, childcare, and housework. Farming has been previously a disproportionately male-dominated occupation (Glazebrook et al., 2020), and women have been reported to be under the pressure of taking on the role of the "traditional farmer's wife" (Kubik et al., 2005). Nichols and Davis (2023) reported that married women in farming experienced increased stress, particularly those with childcare responsibilities, attributing this issue to time pressure and workload. This indicates that female farmers still face the stress of balancing family responsibilities and work. Even in the Japanese rural society, the fact that women are responsible for farming work, housework, and childcare has been taken for granted. According to the

[Mental Health Foundation](#) (2018), women expressed objections to being referred to as “farmer’s wives” and preferred the term “female farmers,” seeking fair treatment and respect from men. In this study, the participants felt resistance toward being called “wives,” driven by their desire to be recognized as individuals and equals regardless of sex. Japan’s gender gap index is 0.647 ([World Economic Forum](#), 2023), the lowest on record. Under these circumstances, the conclusion of family business agreements is being promoted in farming as part of efforts to achieve work–life balance ([Ministry of Agriculture, Forestry and Fisheries](#), 2020). Family business agreements provide opportunities for families to reflect on their roles in daily life and work and to confirm occupational health and health management circumstances. The realization of work–life balance in farming may contribute to the well-being of female farmers and fostering gender equality.

The third notable feature is the independence and creativity exhibited by female farmers who, as a result of feeling the blessings of nature, could discover the potential of farming and felt pride in their profession and way of life. [Benner et al.](#) (1989) stated that individual well-being is

achieved when they are able to identify and engage in activities in the circumstances they face. The realization of well-being for female farmers can be attributed to the fact that the participants felt the blessings of nature and discovered their capabilities. The experience of feeling sustained by nature became an opportunity to impact the significance of food to children through harvesting, communicate the allure of farming and life to consumers through processing and sales, and foster pride in farming and themselves.

Female farmers face issues such as a lack of funds and limited land ownership ([Dibakoane et al.](#), 2022), which hinder their independence in agricultural management. However, [Unay–Gailhard et al.](#) (2021) mentioned how women’s abilities are involved in value-added production. As shown in the participants’ narratives of how farming was suited for women, the participants believed that they could be active in a way that could utilize their own life experiences and ideas and that they had the potential to be involved in and spread the ideas of health through farming and food. Communication using social media has become a means of interaction that connects women to farming ([Mental Health Foundation](#), 2018). The use of social media,

which can widely disseminate information regardless of location, highlights various exchanges regardless of producer, consumer, and generation, and it is also an opportunity for the empowerment of individuals, both women and farmers. It is believed that opportunities for female farmers to take care of themselves and improve their self-esteem, along with that of their colleagues, will also lead to well-being.

This study clarified the well-being of new female farmers through the perspectives of various stakeholders and provided practical insights. However, it had some limitations. First, the participants willingly agreed to participate, and their proactive characteristics might have been reflected in the findings. Although this study used theoretical sampling to generate important concepts, it did not include those who had discontinued farming as comparative study participants.

Future studies may address this issue by including former farmers in comparative studies to explore factors hindering well-being. The development of comparative research with workers in primary industries, such as fishing, where people work with living organisms in the same natural environment, is also a topic for future research.

5. CONCLUSION

The well-being of new female farmers is composed of three main concepts that represent harmony. The theme that connects the main concepts and represents the well-being of new female farmers is “living proudly as a farmer in the embrace of nature.” New female farmers went out into the regions on their own and formed relationships that involved understanding the people and providing mutual assistance. Female farmers also wanted to be recognized as farmers by both male and female individuals. Through this journey, they felt the blessings of nature, discovered that their capabilities through farming, and took pride in their way of life, constituting their well-being. Female individuals need opportunities to be recognized as farmers and where they can be proud of themselves alongside their peers. Future research should further explore the well-being of female workers, particularly those who have left farming and fishing, to provide a comprehensive understanding.

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AUTHOR CONTRIBUTIONS

Substantial contributions to conception, data collection, analysis, writing and manuscript revisions: Ryoko Ozawa and Junko Omori.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The datasets generated during and/or analyzed during the current study are not publicly available due to privacy protection and ethical reasons but are available from the corresponding author on reasonable request.

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