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Investigation of Factors Contributing to Dropout from Health Measurements Among Community-Dwelling Older Adults

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Abstract

Background: We aimed to conduct a fact-finding survey of older adults who dropped out of an ongoing health measurement program initiated since 2017, to identify the factors contributing to their dropout.

Methods: Among the 71 participants in the health measurement study conducted since March 2017, 17 participants (23.9%) were classified as dropouts. A questionnaire survey was administered to these 17 participants, and responses from 9 individuals (response rate: 52.9%) were included in the analysis.

Results: The most common reason for dropout was health challenges, with 44.4% of the older adults having newly detected health problems. Only one person (5.8%) wished to receive home-visit measurement, indicating the difficulty in continuing to support older adults after dropping out of the program.

Conclusion: Therefore, a new system must be established to ensure sustainable support through continued collaboration between the university and the community.

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Introduction

According to the Ministry of Health, Labour and Welfare, Japan's aging rate (the proportion of the population aged ≥65) will reach a record high of 29.3% in 2024, marking the country's transition into a super-aging society [1]. By 2025, approximately 7 million people are expected to suffer from dementia, making dementia prevention an urgent issue for Japan in this super-aging era. The 2022 A Prefecture Health and Medical Plan reports that the geriatric population of A Prefecture, aged 65 years or older, is 557,940, accounting for 31.1% of the prefecture's total population [2]. This indicates that the population of A Prefecture is aging more rapidly than the national average. Consequently, dementia prevention has become a pressing issue in A Prefecture, prompting various initiatives within the region.

We have continuously been conducting health measurements for local older adults since 2017 as a university-community collaboration in B District of A Prefecture, with the aim of early detection, early intervention, and prevention of diseases among community-dwelling older adults, focusing on the associations with physical, mental, social, and cognitive aspects. Measurements have been conducted every six months since March 2017, with 11 sessions completed to date, despite the impact of COVID-19. According to the ongoing study, participants who have continuously taken part in the health measurements from the beginning tend to exhibit relatively good health, as indicated by their physical, mental, social, and cognitive scores [3-7]. Continuous participation may have contributed to these positive outcomes. However, some participants dropped out of the health measurement program. We considered that newly detected health problems might have been a factor in these dropouts, highlighting the importance of identifying dropouts as key targets for early disease detection and intervention, which is the primary purpose of this program. Although some studies have reported on health measurement practices in specific areas, there are very few follow-up studies focusing on dropouts; hence we considered this a novel approach.

Based on the hypothesis that the need for support among those who drop out of health measurements is increasing, we conducted a fact-finding survey of older adults who have dropped out to identify the causes of dropout.

Definition of terms

"Dropouts" in this study are defined as older adults who, after agreeing to participate in the study and taking part in health measurements at least once, are absent from the three most recent measurement sessions (September 2021 to March 2023).

Research objectives

We aimed to conduct a fact-finding survey of those who dropped out of the health measurement program to identify the factors that caused them to drop out.

Materials and Method

Study Design

This was a fact-finding study using a questionnaire survey.

Participants

Of the 71 older adults who participated in the study since March 2017, 17 participants were classified as "dropouts" after agreeing to participate and completing the health measurements at least once. These 17 participants were included in the analysis.

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Methods

Data collection period

The data were collected in March 2023.

Data collection method

A questionnaire on the factors contributing to dropout from health measurements was mailed. The questionnaire was independently developed based on previous studies. It included the following three items: "Reasons for no longer attending health measurements," "Willingness to participate in future health measurements," and "Interest in receiving health measurements through home visits or other means." Each item included a free-text box for respondents to provide reasons and additional comments.

Data analysis methods

Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed using qualitative content analysis methods.

Ethical considerations

Considering the backgrounds of the participants who dropped out of the measurement study, we provided a written explanation stating that their decision not to consent to participate would not result in any disadvantage, that they were free to withdraw their consent at any time, and that all personal data would be anonymized.

This study was approved by the Sanyo Gakuen University Research Ethics Review Committee (2023U010).

Results

Participant attributes

Among the 71 older adults who have participated in the program since March 2017, questionnaires were sent to 17 (23.9%) who were eligible for this study, and 9 responded (response rate: 52.9%), including three males (33.3%) and six females (66.7%), with a mean age of 80.4 ± 4.30 years as of March 2023.

Dropout factors

Four respondents (44.4%) had "health problems," three (33.3%) were "dissatisfied with the content of the health measurements," and two (22.2%) had "no reason to go for a health measurement." The three respondents who were "dissatisfied with the content of the health measurements" commented that they were "dissatisfied with the accuracy of the test," that "the measurement results were poor and did not seem accurate," and that "the waiting period for the measurement was long." The two respondents who answered that they "had no reason to go for a health measurement" were striving to maintain their health through walking and other activities.

Willingness to participate in future health measurements

One respondent (11.1%) stated, "I would like to participate but am unable to," and five respondents (55.6%) stated that they "would like to participate again someday." In the free-text box, there were comments such as "cannot participate due to scheduled surgery," or "cannot participate until I become physically fit enough to ride a bicycle." Three respondents (33.3%) answered that they "had no intention of participating." The free-text comments included "cannot participate because I am bedridden" and "because I have regular medical checkups."

Interest in participating in health measurements through Home-Visits

One respondent (11.1%) "wished to have the health measurement at home," commenting that "although I visit the clinic and day care, it would be reassuring to have my health checked by a specialist at home." Eight respondents (88.9%) answered that they "do not wish to have a visit." Comments included "because I have no complaints about my daily life" and "because I am going to stay in a nursing home."

The participant attributes and each item are shown in Table 1 (shaded items had no answers).

Discussion

Background factors of dropouts

It was found that the main reason for dropping out of the health measurement program was newly detected health problems. As many as 40% of the participants had to drop out of the health measurements due to newly detected health problems. Among them, it became clear that some experienced physical health problems that became severe during the time they were absent from the health measurement, with a few being almost bedridden. There are only a few reports on ongoing health measurement efforts in practice within a specific area, and even fewer follow-up studies on dropouts. More evidence is needed on how

ID	Age	Sex	Reason for dropout	Willingness to participate	Health activities	Means of access	Remarks
A	79	Male	Dissatisfaction	×	o		Participation in community health classes
B	84	Female	Health issue	×	×		
C	77	Female	Health issue	×	×		
D	81	Male	Health issue	o	o	×	Request a visit
E	75	Female	Health issue	×			
F	86	Female	Dissatisfaction	o		×	
G	87	Female	Dissatisfaction	×			
H	78	Male	Health	o	o		Engaging in regular exercise
I	77	Female	Health	o	o		Engaging in regular exercise

Table 1: Participant Attributes and Dropout Factors (n=9).

multiple factors, such as participant demographics, the environment, and community characteristics, affect the dropout rate. Of the participants who dropped out, only one person (5.8%) requested a home visit, indicating the difficulty of continuing support for older people after dropout. We propose the creation of a new system to ensure sustainable support, such as informing participants during the consent process that they can transition from group measurement to home visit measurement once the necessary resources for home visit support are established. In the future, we will conduct a follow-up study with the one participant who requested a home visit to examine the process of health issue development and its causal relationship with frailty, considering physical, mental, social, cognitive, and other aspects.

Future issues and prospects

The results of this study indicated that approximately 40% of participants who dropped out had newly detected health problems. Although it is unclear how they came to have health issues, intervention would have been possible if some signs had been present at the stage when they were participating in the health measurement, and this is a future challenge for early disease detection and intervention.

The comment "after I become physically fit enough to ride a bicycle" indicates the limitation of the current health measurement program, which is a day-care type program targeting older adults who can commute to the community center. Although it is currently difficult to establish a support system that enables those who are unable to walk or ride a bicycle to participate in health measurements, the study revealed that approximately 20% of older adults are willing to participate, but the lack of transportation is a barrier to their participation.

The study also highlighted the need for community living support, even for people who are no longer able to participate in health measurements due to health issues. For example, one participant stated, "I visit the clinic and day care, but it would be reassuring to have my health checked by an expert at home." Sasaki et al. reported in a survey study involving 200 participants in a community health measurement that older adults need an interview with a specialist to address their health-related concerns and questions [8]. This indicates that interviews with a visiting specialist are significant even when health measurements are not involved.

Meanwhile, our survey revealed a discrepancy in the perspective of health and the significance of health measurement between older adults and their supporters, such as "I have been seeing my doctor regularly" and "I am currently healthy and have no problems in my daily life." We believe it is necessary to incorporate valuable opinions such as "the waiting period for health measurement is too long" in future health measurements and to consider ways to connect with as many older adults as possible through health measurement.

Limitations of the Study

The study population was limited to older adults in a particular community, and the sample size was small, which limits the generalizability of the results. It is necessary to continue health measurement activities to contribute to the promotion of health from each aspect of the local elderly population and to further investigate this topic with a larger body of evidence.

Conclusion

The most common reason for dropping out of the health measurement was health challenges. Difficulties in continuing to support older adults after dropping out of the program became apparent and will be an issue for the future. It is desirable to consider a hybrid approach to health measurement that incorporates both day-care and home-visit methods.

Competing Interests

The authors declare that they have no competing interests.

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