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Research Article

Gender Differences in the Associations of Familial Social Support on Depressive Symptoms Among Older Adults in Rural Japan: The Shimane CoHRE Study

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Depressive symptoms pose the risk of transitioning to depression, which increases mortality rates among older adults. In rural Japan, where the population is aging, community bonds are dwindling, raising the risk of experiencing depressive symptoms. Building social support (SS) is gaining attention as a means to prevent depression; however, there is a lack of research on the suitable types of SS resources. The present study hypothesized that SS from or to the family or neighbors would reduce depressive symptom rates among community-dwelling older women and men in Japan. This cross-sectional study analyzed data from 538 women and 439 men aged 65 years or older. The Zung Self-Rated Depression Scale was used to assess depressive symptoms with a score of 40 or higher indicating depressive symptoms. SS was categorized according to whether it was obtained from family or neighbors and the content of the SS was divided into four categories: receiving emotional support, providing emotional support, receiving instrumental support, and providing instrumental support. There was no significant difference in the prevalence of depressive symptoms between women and men. Multiple logistic regression analysis showed that, for women, receiving emotional support from children living with them and providing instrumental support to separated children and relatives, and for men, receiving emotional support from separated children and relatives were significantly associated with a low odds ratio for depressive symptoms. This study suggests that the relationship between SS and depressive symptoms differs between women and men. Intervention studies are needed to clarify whether building an SS environment tailored to community-dwelling Japanese older women and men can alleviate depressive symptoms.

Keywords: cognitive function; depression; older adults; social participation; social support

1. Introduction

Depression is one of the top global burdens [1] and is particularly prevalent among older adults. Depression in older adults is associated with an increased risk of suicide and mortality [2, 3]. Therefore, the World Health Organization (WHO) has called for countermeasures in countries with aging populations [4]. Depression has specific diagnostic criteria and is generally diagnosed by physicians [5]. At its core are depressive symptoms such as persistent sadness, sleep disturbances, and thoughts of death. The incidence risk ratio for depression in people with depressive symptoms who do not yet fully meet the diagnostic criteria is about three times higher than in people without depressive symptoms [6]. Therefore, the detection of depressive symptoms is important to prevent their progression to depression [6].

A meta-analysis that examined global research using self-report surveys such as the Geriatric Depression Scale-15 reported a 35.1% prevalence of depressive symptoms in older adults [7]. A country-by-country evaluation found rates of 34.4% in India [8], 23.6% in China [9], and 28.1% in Japan [9], indicating a high global prevalence.

As social relationships [10], social support (SS) focuses on a person's perception of the availability of help or support from others in their social network, social participation emphasizes active involvement in social activities and interactions such as meeting friends, attending events or functions, or volunteering. Low social participation [11, 12] and a lack of SS [13] have been reported as a risk factor for depression; therefore, the WHO provides guidance on SS for psychological intervention for depression in the general population [14]. However, because the effects of SS on depression vary depending on the country, local conditions, and gender of the recipient [13, 15], it is important to tailor interventions to the understanding of the characteristics of the local population. A study reported that individuals' cultural values and subjective social status vary across world regions and are associated with each SS behavior [16]. For example, existing research shows that people with depressive symptoms are more prevalent in rural areas than in urban areas, possibly owing to economic disparities; however, a Chinese study reported that SS provided by families, social institutions, and communities was associated with reduced depression in both rural and urban areas [17]. In 2016, a Japanese study reported that SS might be more effective in reducing depression rates for those who provide support, especially outside the family, than for those who receive it [15]. However, to our knowledge, previous research did not focus on social relationships in rural areas. Namely, association between SS and social participations and depressive symptoms was not clarified according to rural living conditions.

In addition, there were few studies focusing on the "gender differences" in the relationship between SS and depression among older adults in community settings in Asia [15, 18]. Women are more likely to suffer from depression than men; the same applies to older adult women [19–21]. It has been pointed out that there are aspects of Japanese women's roles within the family and social relationships that differ from those in the West, which may affect their health [22]. A previous study reported that the relationship between the lack of SS and the risk of depression status differs between older women and men in urban areas of Japan [23, 24]. Thus, the association between SS and depression needs to be understood from the perspectives of both women and men.

Therefore, this study aimed to clarify whether there are any gender differences in the association between providing/receiving and emotional/instrumental-SS and the reduction in the prevalence of depressive symptoms among the community-dwelling older adults in Japan.

2. Materials and Methods

2.1. Participants. This cross-sectional study was a secondary analysis of the Shimane CoHRE (Community-Based Healthcare Research and Education) study [25, 26]. The Shimane CoHRE study was conducted in collaboration with health examinations organized by Unnan city (which had a population of 39,032 and a 36.5% aging rate for individuals aged 65 and above, based on the 2015 census), Shimane Prefecture. Health examinations were conducted at six health centers from August to September 2017. Of the 1351 residents who took part in health examinations in Unnan city, 1237 provided consent for this study. The inclusion criteria for this study were as follows: (1) older adults aged 65 years or older and (2) those who were informed of the objectives and procedure and agreed to participate. We excluded 260 cases lacking data on the following variables: age ($n = 183$), Zung Self-Rating Depression Scale (SDS) score ($n = 36$), living arrangements ($n = 2$), cognitive dysfunction ($n = 1$), pain ($n = 14$), chronic disease ($n = 9$), social participation ($n = 11$), and SS ($n = 4$), leaving 977 participants in the analysis.

2.2. Ethical Considerations. The study protocol was approved by the Medical Research Ethics Committee, Shimane University Faculty of Medicine (approval number: KS20221017-1), and written informed consent was obtained from all participants before enrollment. The reporting of the study procedure, analysis, and description are in accordance with the strengthening the reporting of observational studies in epidemiology (STROBE) guidelines [27].

2.3. Instruments. Self-report questionnaires were used to assess SS, depressive symptoms, living arrangements, pain, and social participation. Additionally, the covariates—age, body mass index (BMI), current alcohol consumption habits, current smoking habits, and chronic disease—were based on data from the health examination.

2.4. Exposure Variable: SS. SS is a general term for material and psychological support provided by a person's surroundings. SS was categorized according to whether it was obtained from family or neighbors and was divided by 2-Way SS Scale into four categories based on the instrumental and emotional axes and the providing and receiving axes: receiving emotional support: "Is there someone who listens to your worries and complaints?"; providing emotional support: "Do you have someone whose worries and complaints you listen to?"; receiving instrumental support: "When you are sick and laid up for a few days, is there someone who can take care of you and look after you?"; and providing instrumental support: "Do you have someone that you take care of if they are sick?" [28, 29]. SS was categorized using the questionnaire, and those who answered "yes" were judged to have SS. If they answered "yes," they were asked to select who they received support from or whom they provided support to among the following: "spouse," "children living with them," "separated children who did not live with them and relatives," and "neighbors." The percentage of individuals who answered each item was considered when ascertaining levels of SS [15].

2.5. Outcome Variable: Depressive Symptoms. We assessed depressive symptoms using the SDS, which has high sensitivity and is suitable for screening depressive symptoms [30–32]. The scale comprises 20 questions on a four-point scale to

rate the depression status and takes approximately 10 min to complete. According to a previous study involving older adults, a score of 40 or above out of 80 was considered as having depressive symptoms, and a score of 39 or less was considered as presenting no depressive symptoms [32].

2.6. Covariates. We included the following variables as covariates: gender (women or men), age (continuous), current smoking habits (yes or no), current alcohol consumption habits (yes or no), and living arrangements (living alone or not living alone). BMI was calculated and classified as a continuous variable (kg/m^2). The presence (yes or no) of chronic diseases was self-reported and included if the participant had been diagnosed by a physician or was currently taking medication (i.e., hypertension, hyperlipidemia, diabetes, stroke, heart disease, or kidney disease). Pain (yes or no) was assessed based on whether the participant reported experiencing pain in the shoulders, lumbar region, or knees. Cognitive function was assessed by the Cognitive Assessment for Dementia iPad Version (CADi2). This is a dementia screening tool that can be completed using an iPad (iPad; Apple Inc., Cupertino, CA, United States). A score of six points or less is defined as cognitive dysfunction in the present study. We used the number of social participation as a continuous variable based on the following questions based on previous studies [26, 33]: Do you participate in community activities in the following areas: (1) Industrial organizations such as agricultural cooperatives and businesses; (2) community organizations such as neighborhood associations, neighborhood councils, and senior citizen associations; (3) sports, health promotion, hobbies, and cultural groups; and (4) festivals and event planning? The score for each part was calculated as "Yes" = 1 point and "No" = 0 points, and the total score was taken as a continuous variable with a range of 0–4.

2.7. Statistical Analysis. Descriptive statistics were used to analyze the characteristics of the study participants, divided by gender. Between-group differences were examined using the χ^2 test for categorical variables and Mann–Whitney U test for continuous data. To examine the association between SS and depressive symptoms, logistic regression analysis was performed to estimate the odds ratios (ORs) and 95% confidence intervals (CIs). The four SS categories (receiving emotional support, providing emotional support, receiving instrumental support, and providing instrumental support) were individually entered as exposure variables. Model 1 included all covariates except for social participation, which was added in Model 2. For the sensitivity analysis, logistic regression analysis was used to examine SS with depressive symptoms that excluded participants with living alone. Statistical analyses were performed using STATA 17.0 (StataCorp., College Station, TX, United States). For all analyses, p-values less than 0.05 were considered statistically significant.

3. Results

Table 1 shows the characteristics of the 977 participants divided by gender. Depressive symptoms were present in 146 (27.1%) women and 113 (25.7%) men with no significant difference. When comparing the receiving or providing of emotional or instrumental support between women and men, it has been found that the proportion of "yes" for children living with, separated children or relatives, and neighborhood was higher in women than in men, whereas the proportion of "yes" for a spouse was higher in men than in women. The number of participants without any of the four forms of SS was nine (0.9%) out of 977.

Table 2 shows that types of SS from all sources tended to have low ORs for depressive symptoms. In Model 1, women who received emotional support from children living with them (OR = 0.61; 95% CI, 0.39–0.93), received instrumental support from children living with them (OR = 0.64; 95% CI, 0.43–0.97) and from separated children or relatives (OR = 0.62; 95% CI, 0.42–0.91), and provided instrumental support to separated children or relatives (OR = 0.59; 95% CI, 0.40–0.87) had significantly low ORs for depressive symptoms. Men who received emotional support from the spouse (OR = 0.56; 95% CI, 0.33–0.96) and separated children or relatives (OR = 0.56; 95% CI, 0.32–0.97) had significantly low ORs for depressive symptoms. For women, receiving emotional support from children living with them (OR = 0.62; 95% CI, 0.40–0.96) and providing instrumental support to separated children or relatives (OR = 0.61; 95% CI, 0.41–0.91) were significantly associated with low prevalence of depressive symptoms in Model 2. For men receiving emotional support from separated children or relatives (OR = 0.55; 95% CI, 0.31–0.97) was significantly associated with low prevalence of depressive symptoms. In all groups in Model 2, higher frequency of social participation was significantly associated with low ORs of depressive symptoms among women and men. As a result of the sensitivity analysis, after adjusting for all covariates, it was found that women who received emotional (OR = 0.46; 95% CI, 0.27–0.78) and instrumental support (OR = 0.61; 95% CI, 0.38–0.99) from their children living with them had a significantly lower prevalence of depressive symptoms. In men, however, no significant association was observed.

4. Discussion

This study examined to clarify whether there are any gender differences in the association between providing/receiving, emotional/instrumental-SS, and the reduction in the prevalence of depressive symptoms among the community-dwelling older women and men. To summarize the results of this study, receiving emotional support resulted in a lower prevalence of depressive symptoms in both older women and men. However, there was a difference in the provider, whether they were cohabiting or living separately from their children. In women, providing instrumental support to children living separately often led to a lower prevalence of depressive symptoms. For preventing depressive symptoms among community-dwelling older adults, SS with children may be primarily important. The prevalence of depressive symptoms in our study was 26.5%. A previous study using the SDS cutoff of 50 points or higher reported a prevalence of 10.4% in a survey of elderly community-dwelling residents in Japan [34]. This study adopted the commonly used SDS cutoff score of 40 points,

Table 1: Participants' characteristics.

Variables	Total $N = 977$	Women $n = 538$ (55.1)	Men $n = 439$ (44.9)	p-Value
Age, median (IQR)	73 (69–78)	73.0 (69–77)	74.0 (69–79)	0.08
Body mass index, median (IQR)	21.9 (20–24)	21.5 (19.6–23.6)	22.5 (20.5–24.4)	**<0.01**
Depressive symptoms, *n* (%)	259 (26.5)	146 (27.1)	113 (25.7)	0.62
Living alone, *n* (%)	108 (11.1)	68 (12.6)	40 (9.1)	0.08
Cognitive dysfunction, *n* (%)	59 (6.0)	26 (4.8)	33 (7.5)	0.08
Pain, yes, *n* (%)	537 (55.0)	294 (54.6)	243 (55.4)	0.83
Alcohol habit, yes, *n* (%)	258 (26.4)	34 (6.3)	224 (51.0)	**<0.01**
Smoking, yes, *n* (%)	58 (5.9)	2 (0.4)	56 (12.8)	**<0.01**
Chronic disease, *n* (%)	752 (77.0)	415 (77.1)	337 (76.8)	0.89
Number of social participations, mean (SD)	2.1 (1.2)	2.1 (1.2)	2.3 (1.2)	**<0.01**
Receiving emotional support, *n* (%)				
Spouse	632 (64.7)	295 (54.8)	337 (76.8)	**<0.01**
Children living with	235 (24.1)	153 (28.4)	82 (18.7)	**<0.01**
Separated children or relatives	379 (38.8)	275 (51.1)	104 (23.7)	**<0.01**
Neighborhood	183 (18.7)	125 (23.2)	58 (13.2)	**<0.01**
None of the above	39 (4.0)	15 (2.8)	24 (5.5)	**0.03**
Providing emotional support, *n* (%)				
Spouse	579 (59.3)	258 (48.0)	321 (73.1)	**<0.01**
Children living with	202 (20.7)	122 (22.7)	80 (18.2)	0.09
Separated children or relatives	355 (36.3)	236 (43.9)	119 (27.1)	**<0.01**
Neighborhood	233 (23.8)	152 (28.3)	81 (18.5)	**<0.01**
None of the above	64 (6.6)	34 (6.3)	30 (6.8)	0.750
Receiving instrumental support, *n* (%)				
Spouse	671 (68.7)	317 (58.9)	354 (80.6)	**<0.01**
Children living with	318 (32.5)	208 (38.7)	110 (25.1)	**<0.01**
Separated children or relatives	313 (32.0)	219 (40.7)	94 (21.4)	**<0.01**
Neighborhood	27 (2.8)	19 (3.5)	8 (1.8)	0.10
None of the above	56 (5.7)	29 (5.4)	27 (6.2)	0.61
Providing instrumental support, *n* (%)				
Spouse	635 (65.3)	322 (60.3)	313 (71.5)	**<0.01**
Children living with	244 (25.1)	150 (28.1)	94 (21.5)	**0.02**
Separated children or relatives	271 (27.9)	187 (35.0)	84 (19.2)	**<0.01**
Neighborhood	44 (4.5)	31 (5.8)	13 (3.0)	**0.03**
None of the above	171 (17.6)	91 (17.0)	80 (18.3)	0.62
No social support, *n* (%)	9 (0.9)	0 (0)	9 (2.1)	**<0.01**

Note: Values in boldface show significance ($p < 0.05$).
Abbreviations: IQR, interquartile range; SD, standard deviation.

which is intended to pick up mild depression, so the depressive symptoms rate was higher than 10.4%. On the other hand, a similar Japanese study in 2018 showed a prevalence of depressive symptoms of 28.1% as evaluated by the Geriatric Depression Scale-15 [35], which was close to our results. Consequently, it can be assumed that the participants of this study were similar to those in previous research in Japan.

Even after adjusting for social participation, participants who received emotional support from their children showed low rates of depressive symptoms. Thus, receiving emotional support from children might be effective in reducing depressive symptoms, regardless of the presence or absence of social participation. Previous studies have shown an association between SS and depressive symptoms [15, 18, 36–38]. Some have also demonstrated that a lack of instrumental SS is a risk factor for depression, especially in Japanese older adults [23]. The present study showed that familial SS was associated with lower depression rates and was influenced by the characteristics of Asians, according to previous studies [13, 18]. Although the support of a spouse and friends is more important, support from children is associated with lesser rates of depression in Asia, compared with Western countries [18]. This insight is consistent with the analysis of female participants in the present study. Furthermore, our study found that providing instrumental support to a separated children or relatives was also associated with lower ORs of depressive symptoms in women. In a large-scale study in Japan focusing on older adults, it has been reported that, older women, regardless of their marital status (married or others), have significantly lower scores of depressive symptoms when

Table 2: Associations between social support and depression among older women and men.

Variables	Women						Men					
	Adjusted model 1			Adjusted model 2			Adjusted model 1			Adjusted model 2		
	OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI	
Receiving emotional support												
Spouse	0.83	0.55	1.23	0.81	0.54	1.21	**0.56**	**0.33**	**0.96**	0.58	0.34	1.01
Children living with	**0.61**	**0.39**	**0.93**	**0.62**	**0.40**	**0.96**	0.64	0.34	1.20	0.66	0.35	1.25
Separated child or relative	0.98	0.68	1.41	1.09	0.75	1.59	**0.56**	**0.32**	**0.97**	**0.55**	**0.31**	**0.97**
Neighborhood	0.87	0.55	1.36	0.96	0.61	1.52	0.62	0.31	1.25	0.73	0.36	1.49
Community participation	—	—	—	**0.71**	**0.61**	**0.83**	—	—	—	**0.69**	**0.58**	**0.83**
Providing emotional support												
Spouse	0.85	0.58	1.26	0.83	0.56	1.23	0.79	0.48	1.31	0.87	0.52	1.45
Children living with	0.82	0.53	1.28	0.84	0.54	1.32	0.54	0.29	1.01	0.57	0.30	1.08
Separated child or relative	0.80	0.55	1.15	0.84	0.58	1.21	0.89	0.54	1.47	0.91	0.55	1.52
Neighborhood	0.69	0.46	1.05	0.81	0.52	1.24	0.75	0.43	1.33	0.89	0.50	1.59
Community participation	—	—	—	**0.72**	**0.62**	**0.84**	—	—	—	**0.69**	**0.58**	**0.83**
Receiving instrumental support												
Spouse	0.73	0.48	1.13	0.75	0.48	1.16	0.61	0.33	1.13	0.66	0.36	1.24
Children living with	**0.64**	**0.43**	**0.97**	0.66	0.44	1.01	0.74	0.44	1.26	0.82	0.48	1.41
Separated child or relative	**0.62**	**0.42**	**0.91**	0.68	0.46	1.01	0.72	0.41	1.24	0.76	0.43	1.34
Neighborhood	0.72	0.25	2.07	0.86	0.29	2.53	0.39	0.04	3.46	0.49	0.05	4.50
Community participation	—	—	—	**0.73**	**0.62**	**0.85**	—	—	—	**0.69**	**0.58**	**0.83**
Providing instrumental support												
Spouse	1.43	0.94	2.19	1.40	0.91	2.15	0.75	0.45	1.23	0.79	0.47	1.31
Children living with	1.08	0.72	1.64	1.09	0.72	1.66	0.93	0.54	1.62	1.00	0.57	1.75
Separated child or relative	**0.59**	**0.40**	**0.87**	**0.61**	**0.41**	**0.91**	0.78	0.44	1.40	0.82	0.45	1.47
Neighborhood	0.98	0.45	2.13	1.19	0.54	2.62	0.39	0.08	1.95	0.48	0.09	2.51
Community participation	—	—	—	**0.71**	**0.61**	**0.83**	—	—	—	**0.69**	**0.58**	**0.83**

Note: Four social support parameters (receiving emotional support, providing emotional support, receiving instrumental support, and providing instrumental support) were analyzed separately. Model 1 was adjusted for age, body mass index, living alone, cognitive dysfunction, pain, alcohol, smoking, and chronic disease. Model 2 was adjusted for the variables in model 1 and community participation. Values in boldface show significance (p-value <0.05).
Abbreviations: CI, confidence interval; OR, odds ratio.

they provide instrumental support to their children, whether they live together or separately [15]. Therefore, our findings were congruent with the previous research. When considering why providing instrumental support is beneficial for depressive symptoms, it can be speculated that giving something to others, including one's own children, may lead to personal joy and happiness. For instance, older adults' altruistic attitudes and helping behaviors are potentially beneficial for mental health issues such as depressive symptoms [39]. Thus, based on the results of this study, providing instrumental support to separated children may lead to joy and happiness and may contribute to the reduction of depressive symptoms. In an analysis not adjusted for social participation (Model 1), receiving instrumental support from children living in the household or children or relatives living separately was associated with a low prevalence of depressive symptoms among women. In general, women are known to be more prone to depressive symptoms than men owing to chronic tension, low emotion regulation proficiency, and ruminative thinking [40]. However, a previous study reported that women use several different emotion regulation strategies [36]. Possibly reflecting these emotion regulation strategies, women were found to have a lower rate of depression not only associated with SS from family but also from neighbors, with more items related to this than men [11]. Thus, women without depressive symptoms in the present study might have better used various SS resources both within and outside the family.

Meanwhile, the analyses not adjusted for social participation (Model 1) revealed that, for men, having a spouse to listen to their complaints was significantly associated with a low prevalence of depressive symptoms. Model 2 revealed that receiving emotional support from children or relatives living separately was associated with reduced depressive symptoms in older men. In Japanese older adults, it has been reported that the relational and functional aspects of family relationships are significantly associated with a reduction in parental feelings of loneliness, particularly in the absence of living with children [41]. Older men who receive emotional support from their separated children and relatives may be able to maintain strong parent–child bonds and alleviate feelings of loneliness, even in the presence of physical distance. In addition, the ORs for emotional support from children living with their parents and those who lived separately were almost the same for men, but different for women. Compared to 23.7% of men, women received 51.1% more

emotional support from their separated children. However, in the case of women, it was considered beneficial for depressive symptoms to receive emotional support from children who are closer when comparing cohabiting children with separated children. Sensitivity analysis indicated that receiving emotional or instrumental support from children living in the household was associated with a lower prevalence of depressive symptoms. In other words, unlike men, physical distance for receiving SS may be important for women.

The results of this study imply that maintaining family connections is important for reducing depressive symptoms in community-dwelling older adults. SS is reported to be less affected by regional differences and income disparities [42]. Therefore, it is crucial to utilize the SS function as a public health measure for effective depressive symptoms prevention in the community. The WHO has developed a program to help nonprofessionals provide SS for patients with depression in the community [14]. Based on this program, it is necessary to build an SS environment tailored to individual characteristics. For example, older adults prefer to rely on their spouse, other family members, and friends as sources of SS, in that order [43], and those who receive support from their children are likely to have fewer depressive symptoms than those who receive support from their friends [44]. Therefore, it is desirable to ensure that older adults living in rural areas receive SS from their children and other family members. In Japan, older adults living in rural areas are increasingly living apart from their families [45], and SS is expected to be less common in rural areas than in urban areas [42]. In this context, studies have shown that regularly sending postcards to older adults and providing emotional support through telephonic communication reduce depression [46, 47]. The advantage of familial-related SS shown in this study is that it can be received or provided in a simple way, such as by listening to complaints.

4.1. Limitations. First, this study lacks information on the presence or absence of a clinical diagnosis of depression and cognitive impairments among participants. Consequently, we cannot rule out the possibility of overestimating the association between SS and depressive symptoms. Furthermore, it may have been challenging for participants with cognitive impairments to accurately complete the self-report questionnaires owing to misunderstandings and memory issues. These factors could have impacted the results, necessitating cautious interpretation. Second, we conducted surveillance in one city. Therefore, potential confounding factors between SS and depressive symptoms may include socioeconomic status and other personal factors in rural areas of Japan. In addition, there may be cultures that are unique to a region or family. Further research is needed to generalize our findings to other populations. Third, this was a cross-sectional study; thus, we could not establish causal relationships. Finally, the small sample size resulted in reduced statistical power, potentially leading to an underestimation of the associations in our findings.

5. Conclusions

The present study suggests that SS is beneficial to lower prevalence of depressive symptoms among community-dwelling older adults. However, partial differences were observed between men and women. For older women, receiving emotional support from children living with them and providing instrumental support to a separated children and relatives were related to a low prevalence of depressive symptoms. For older men, receiving emotional support from separated children or relatives was related to a low prevalence of depressive symptoms. In rural areas of Japan, SS is annually decreasing owing to depopulation, and research on viable interventions to build SS and prevent depressive symptoms is needed.

Data Availability Statement

The content did not include a provision to share the data publicly.

Ethics Statement

The study protocol, including the participants' data, was approved by the Medical Research Ethics Committee of Shimane University.

Conflicts of Interest

The authors declare no conflicts of interest.

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