

Satisfaction Level of Participants with the Content Health Promotion Seminars Organized by Community Pharmacies in Chiba, Japan

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Abstract

Aim: This study aimed to identify the level of satisfaction and needs of the content of the “health promotion seminars” to support health promotion and improve healthy life expectancy provided by community pharmacies to community residents.

Methods: An awareness survey was conducted among seminar participants. Anonymous survey questionnaires were distributed to the participants of the six sessions of the “health promotion seminars” held from December 2019 to February 2020 were recruited. Out of 136 participants, 116 responses were obtained (response rate: 85.3%; female: 114, male: 1, unanswered: 1) from the target population.

Results: The level of satisfaction with the seminar was reported at 77.5% (n=90) for the first run and 68.5% (n=80) for the second run. Currently, the “Health Promotion Seminar” consists of an active (participation) lecture in the first lecture and a passive (classroom) lecture in the second lecture, conducted by pharmacists and dietitians. The level of understanding (84.5%) and active participation (86.2%) in the first course were higher than those in the second course (understanding: 80.2%, active participation: 80.2%). Participants reported anxiety issues in their everyday life stemming from the items “Forgot to take medicine” and “frequency of using the toilet increased night”.

Conclusions: Health promotion seminars are viewed by community residents to be effective in disseminating health promotion information. In the future, it is necessary to revise the content of the courses to include the proper use of medicines and the prevention of diseases that can affect daily life.

Keywords: Community contribution; Pharmacy; Survey; Health promotion

Introduction

Japan is currently in an era with very low fertility and a highly aging population, with nearly 40% of the population aged 65 or older. From the perspective of maintaining the social security system and its finances, Japan is facing a period of projected higher demands in its medical, long-term care, and welfare services [1,2]. Social security system reforms for the era of super-low birthrate and aging society in 2025 include discussions on the advancement of drug therapy and the promotion of community medicine, including home care. As a result, there are increasing social expectations that pharmacists should exercise their professional capabilities proactively and in collaboration with other health professions [3]. The number of working pharmacists in Japan is approximately 300,000, with a gender ratio of 38.7% male and 61.3% female [4]. The Ministry of Health, Labour and Welfare (MHLW) expects pharmacists to contribute from “pre-hospital pharmacies” to “family pharmacists” and to the “community” as part of its vision of “pharmacies for patients” [5].

In recent years, drug information and self-medication have been important measures against diseases, and it is desirable to hold study

sessions and workshops that incorporate the needs expected among patients and local community residents [6]. Our pharmacies have thus far contributed as community-based family pharmacies and family pharmacists. In addition to daily operations such as dispensing and providing medication guidance in outpatient and home settings, pharmacists and dietitians have been conducting “Health Promotion Seminars” at intervals of 2~4 times/month as interprofessional work to promote health and extend life expectancy healthily as a community health station. Therefore, an awareness survey was conducted among seminar participants. Our community pharmacies had the intention of allowing community residents to acquire literacy for continuous health promotion and healthy life extension. We expect that this will be a step toward expanding the services provided by the local comprehensive services by increasing cooperation (collaboration) activities with local residents and other pharmacists. There are several methods for evaluating the quality of medical care that focus on the “structure” (structure), “process” (process), and “outcome” (result or outcome) of medical care [7]. This survey might be allow us to confirm the main outcomes of the seminar participants. The survey will also help improve the quality of the seminar content. If there is

a discrepancy between these and the pharmacists' perceptions and awareness, specific guidelines, and goals for improving patient QoL can be provided to the pharmacies. If there is a discrepancy between these and the pharmacists' perceptions and awareness, specific guidelines, and goals for improving patient QoL can be provided to the pharmacies. Therefore, it is believed that this will also lead to the brushing up of pharmacists' competencies.

Hence, we will address not only events related to pharmacotherapy but also practical everyday questions relating to medicines and health, and capture what the community would like community pharmacies to implement in our "Health Promotion Seminars".

Method

Research subjects

The participants from the six "Health Promotion Seminars" provided by community pharmacies in Saitama, Japan held from December 2019 to February 2020 recruited 136 participants (local community residents).

Survey method

Pharmacy staff directly distributed anonymous survey questionnaires to the "Health Promotion Seminars" participants. The questionnaire contained 13 items, including satisfaction with the health promotion seminars (Table 1). The health promotion seminars were held at facilities near each pharmacy. The study was approved by Josai University Ethical Committee in Saitama, Japan (HME-2019-21A) prior to its implementation.

Results

Background of survey respondents

Of the 116 respondents, 107 were >65 years old, making the respondents predominantly an elderly population of participants (Table 2). Responses were obtained from 116 (response rate: 85.3%; female:114, male:1, unanswered:1).

Participation in "Health Promotion Seminars" and the reasons for attendance

The reasons for participating in the "Health Promotion Seminars" cited by participants were been invited by acquaintances/friends (63.0%, 74 respondents), finding information from the campaign poster (22.4%, 28 respondents), recommended by the pharmacy staff (3.4%, 6 respondents), finding information from the website (2.6%, 3 respondents), recommended by family members (1.7%, 2 respondents), other (3.4%, 1 respondent), and 3.4% (2 respondents) had no response (S.I. 1(a)).

On the frequency, they had participated in the "Health Promotion Seminars" 8.6% (10 persons) were first-time attendees, 0.9% (1 person) attended at least once, 3.4% (4 persons) attended at least twice and three times, 4.4% (5 persons) have attended at least four times, 16.4% (19 persons) have attended at least five to ten times. The majority of the participants, (61.2%, 71 persons) have attended at least more than ten times while 1.7% (2 persons) did not indicate (S.I. 1(b)).

Awareness of "Health Promotion Seminar" participants

The results of the frequency of participation showed that 61.2% of the respondents had attended 10 or more "Health Promotion Seminars". The first and second lectures were given at each Health Promotion Seminar. Table 3 shows the results of Question #5, "How did you feel about the seminar?", the first seminar was rated as 'Good'

(77.5%, 90 responses), 'Slightly good' (6.9%, 8 responses), 'Slightly bad' (0.9%, 1 response), 'Bad' (0.9%, 1 response), and 13.8% (16 responses) opted not to indicate. Regarding the second lecture, a lower satisfaction level was observed. It was rated as 'Good' by 68.5% (80 responses), 'Slightly good' by 10.3% (12 responses), 'Slightly bad' by 0.9% (1 response), 'Bad' by 0.9% (1 response), and 'No response' 18.5% (22 students) by participants.

Table 4 shows the results of Question #6, "Did you understand today's lecture?" Regarding the first lecture, 79.3% (92 responses) respondents reported that they understood, 5.1% (6 responses) slightly understood, 0.9% (1 response) slightly not understood the seminar, 0.86% (1 response) did not understand the seminar, and 13.8% (16 responses) had no response. In the second lecture, 69.8% (81 students) of the respondents signified that they understood, 10.3% (12 responses) slightly understood, 0.9% (1 response) slightly understood, did not understand 0.9% (1 response) the seminar, and 18.8% (21 responses) did not indicate answers.

Table 5 shows the results for Question 7, "Were you able to participate actively in the lecture?" In the first lecture, 81.9% (95 responses) of respondents reported that they could participate actively, 4.3% (5 responses), slightly participated actively, 0.9% (1 response) were somewhat unable to participate, 0.9% (1 response) couldn't participate actively, and 12.0% (14 responses) did not respond. In the second lecture, the majority of the target population (75.9%, 88 responses) reported active participation in the seminar.

The willingness of participants to join succeeding seminars was captured using Question 8 "Would you like to participate in the next time such a training session is held?" The majority (77.6%, 90 responses) of the participants wanted to participate, slightly wanted to participate (9.5%, 11 responses), somewhat did not want to participate (1.7%, 2 responses) in the next seminar run, while 9.5% (11 persons) did not respond. Responses for Question 9 "Do you think there is a need to sustain seminar like today's?" were as follows: 73.3% (85 responses) agreed, 10.3% (12 responses) somewhat agreed, 1.7% (2 responses) somewhat disagreed, 0.9% (1 response) did not agree, and 13.8% (16 response) did not respond.

Requests for the "Health Promotion Seminar"

Regarding Questions 10, and 11, 44 of the 116 respondents expressed a desire for the content of the seminar. The participant expressed interest to learn how to use an automated external defibrillator (AED; 6 respondents), the pathophysiology of dehydration (5 respondents), and how to brush their teeth (4 respondents). Five respondents showed interest in exercising their legs and hips. Two respondents showed interest in the prevention of age-related cognitive decline. The need to improve the program was raised by 14 of the 116 participants. They indicated the date and time (6 respondents), venue of the seminar (3 respondents), and improving the program structure (2 respondents).

Issues participants have in their daily lives

Thirty-two (32) out of 116 participants responded to Question 12, "Do you have any problems with your medications in your daily life?". The most common problems were forgetting to take medicines (9 respondents), difficulty in administering eye drops (4 respondents), and difficulty in taking antibiotics (3 respondents).

For Question 13, "Do you have any problems in your daily life other than medication?", 47 of 116 responded with concerns over an increase in the frequency of using the toilet (15 responses), forgetfulness (13 responses), and numbness or stiffness in the legs or joint pain (7 responses).

Table 1: Questionnaire item.

Q1: What is your gender?
1. Male 2. Female 3. Other
Q2: What is your age (generation)?
1. 20s 2. 30s 3. 40s 4. 50s 5. 60s 6. 70s 7. 80s 8. 90s or older 9. don't know
Q3: What motivated you to participate in the "health promotion seminar"? Please select one answer.
1. Invited by acquaintance/friend 2. Recommended by family members 3. Recommended by the pharmacy staff 4. Finding information from the campaign poster 5. Finding information from the website 6. Other
Q4: Please provide the number of times you have attended "health promotion seminars" in the past.
1. First-time 2. Once 3. Twice 4. Three times 5. 4 times 6. 5 to 10 times 7. more than 10 times
Q5: We would like to ask you how you felt about the seminar. Choose one that applies.
1. First lecture----- (good) 1--2--3 --4 (Bad) 2. Second lecture ----- (good) 1--2--3 --4 (Bad)
Q6: Did you understand today's lecture? Please select one answer.
1. First lecture ----- (understood) 1--2--3--4 (did not understand) 2. Second lecture ----- (understood) 1--2--3--4 (did not understand)
Q7: Were you able to participate actively in the lecture? Please select one answer.
1. First lecture ----- (could participate) 1--2--3--4 (couldn't participate) 2. Second lecture ---- (could participate) 1--2--3--4 (couldn't participate)
Q8: Would you like to participate in the next time such a training session is held? Please select one answer.
Participate in the next such training at ----- (participate) 1--2--3--4 (not like to participate)
Q9: Do you think there is a need to sustain seminar like today's? Please select one answer.
Needs to be sustained ----- (agree) 1--2--3--4 (disagree)
Q10: What would you like to find next time? Please be more specific.
Q11: Please suggest any improvements that you think should be made in the future and how to achieve them.
1. Date and time 2. Location 3. Program structure 4. Others
Q12: Do you have any problems with your medications in your daily life? Please be specific.
Q13: Do you have any problems in your daily life other than medication? Please be specific.

Table 2: Background of Survey Respondents of "health promotion seminar".

Location	Lecture content (Lecture 1/Lecture 2)	50s	60s	70s	80s	90s or older	do not know
A	Exercises to improve muscle strength/Miniature tree made from pine cones	2	1	17	5	-	-
	Lecture on Improving Blood Circulation/How to Extend Healthy Life Span	2	8	23	10	-	2
	Lecture on Preventing Back Pain/How to Take Care of Your Dental Care	-	5	6	2	-	-
B	Lecture on Prevention of Knee Pain and Back Pain/Nutritionist Lecture (Let's take care of your chills!)	2	0	5	2	-	-
	Muscle strengthening exercises/Snow Boy production	1	1	7	2	-	-
	Lecture on improving blood circulation/Pharmacy lecture (3 chemistry experiments using medicines)	0	1	7	5	-	-
	total	7	16	65	26	0	2

Table 3: Satisfaction of Participants in the First and Second Lectures.

First lecture												
Contents	Location	Number of Participants	Good		Slightly good		Slightly bad		Bad		No answer	
			Number (N)	%	N	%	N	%	N	%	N	%
Exercises to improve muscle strength	A	25	64.0	16	4.0	1	4.0	1	4.0	1	24.0	6
	B	11	90.9	10	0.0	0	0.0	0	0.0	0	9.1	1
Lecture on Preventing Back Pain	A	13	92.3	12	0.0	0	0.0	0	0.0	0	7.7	1
	B	9	66.7	6	11.1	1	0.0	0	0.0	0	22.2	2
Lecture on Improving Blood Circulation	A	45	84.4	38	6.7	3	0.0	0	0.0	0	8.9	4
	B	13	61.5	8	23.1	3	0.0	0	0.0	0	15.4	2
Second lecture												
Contents	Location	Number of participants	Good		Slightly good		Slightly bad		Bad		No answer	
			Number (N)	%	N	%	N	%	N	%	N	%
Miniature tree made from pinecones	A	25	64.0	16	4.0	1	4.0	1	4.0	1	24.0	6
Snow Boy production	B	11	90.9	10	0.0	0	0.0	0	0.0	0	9.1	1
Nutritionist Lecture Let's take care of your chills!	A	13	92.3	12	0.0	0	0.0	0	0.0	0	7.7	1
How to Take Care of Your Dental Care	B	9	66.7	6	11.1	1	0.0	0	0.0	0	22.2	2
How to Extend Healthy Life Span	A	45	84.4	38	6.7	3	0.0	0	0.0	0	8.9	4
Pharmacy lecture 3 chemistry experiments using medicines	B	13	61.5	8	23.1	3	0.0	0	0.0	0	15.4	2
Total		116	69.0	80	10.3	12	0.9	1	0.9	1	19.0	22

Table 4: Comprehension Levels of Participants in the First and Second Lectures.

First lecture												
Contents	Location	Number of participants	Good		Slightly good		Slightly bad		Bad		No answer	
			Number (N)	%	N	%	N	%	N	%	N	%
Exercises to improve muscle strength	A	25	64.0	16	8.0	2	0.0	0	4.0	1	24.0	6
	B	11	72.7	8	0.0	0	0.0	0	0.0	0	27.3	3
Lecture on Preventing Back Pain	A	13	92.3	12	0.0	0	0.0	0	0.0	0	7.7	1
	B	9	66.7	6	11.1	1	0.0	0	0.0	0	22.2	2
Lecture on Improving Blood Circulation	A	45	93.3	42	2.2	1	2.2	1	0.0	0	2.2	1
	B	13	61.5	8	15.4	2	0.0	0	0.0	0	23.1	3
Second lecture												
Contents	Location	Number of participants	Good		Slightly good		Slightly bad		Bad		No answer	
			Number (N)	%	N	%	N	%	N	%	N	%
Miniature tree made from pinecones	A	25	48.0	12	16.0	4	0.0	0	4.0	1	32.0	8
Snow Boy production	B	11	45.5	5	18.2	2	0.0	0	0.0	0	36.4	4
Nutritionist Lecture Let's take care of your chills!	A	13	92.3	12	0.0	0	0.0	0	0.0	0	7.7	1
How to Take Care of Your Dental Care	B	9	55.6	5	22.2	2	0.0	0	0.0	0	22.2	2
How to Extend Healthy Life Span	A	45	88.9	40	2.2	1	2.2	1	0.0	0	6.7	3
Pharmacy lecture 3 chemistry experiments using medicines	B	13	53.9	7	23.1	3	0.0	0	0.0	0	23.1	3
Total		116	69.8	81	10.3	12	0.9	1	0.9	1	18.1	21

Table 5: Positive Attitudes of Course in the First and Second Lectures.

First lecture												
Contents	Location	Number of participants	Good		Slightly good		Slightly bad		Bad		No answer	
			Number (N)	%	N	%	N	%	N	%	N	%
Exercises to improve muscle strength	A	25	76.0	19	0	0	0.0	0	4.0	1	20.0	5
	B	11	72.7	8	0.0	0	0.0	0	0.0	0	27.3	3
Lecture on Preventing Back Pain	A	13	92.3	12	0.0	0	0.0	0	0.0	0	7.7	1
	B	9	66.7	6	0.0	0	11.1	1	0.0	0	22.2	2
Lecture on Improving Blood Circulation	A	45	93.3	42	4.4	2	0.0	0	0.0	0	2.2	1
	B	13	61.5	8	23.1	3	0.0	0	0.0	0	15.4	2
Total		116	81.9	95	4.3	5	0.9	1	0.9	1	12.1	14
Second lecture												
Contents	Location	Number of participants	Good		Slightly good		Slightly bad		Bad		No answer	
			Number (N)	%	N	%	N	%	N	%	N	%
Miniature tree made from pinecones	A	25	64.0	16	4.0	1	0.0	0	4.0	1	28.0	7
Snow Boy production	B	11	72.7	8	0.0	0	0.0	0	0.0	0	27.3	3
Nutritionist Lecture Let's take care of your chills!	A	13	84.6	11	7.7	1	0.0	0	0.0	0	7.7	1
How to Take Care of Your Dental Care	B	9	55.6	5	0.0	0	11.1	1	0.0	0	33.3	3
How to Extend Healthy Life Span	A	45	88.9	40	4.4	2	0.0	0	0.0	0	6.7	3
Pharmacy lecture 3 chemistry experiments using medicines	B	13	61.5	8	7.7	1	7.7	1	0.0	0	23.1	3
Total		116	75.9	88	4.3	5	1.7	2	0.9	1	17.2	20

Discussion

This community pharmacy-based seminar described in this study introduces the "Health Promotion Seminar" to a local community in Chiba, Japan. The most common motivation for participation in the "Health Promotion Seminar" was an invitation from an acquaintance or friend, suggesting that the "Health Promotion Seminar" is utilized as a venue for the local community members to interact. The mean number of participants' attendance in the seminar was 10 or more, which was the highest frequency. Recently, the health awareness of people and the environment surrounding medical care have changed, and patients and local community people themselves are increasingly seeking the information they need to live healthy lifestyles. It can be assumed that the "Health Promotion Seminar" would directly contribute to the improvement of participants' health awareness because it is easy to maintain the motivation for their continuous participation. The results of the participants' comprehension and satisfaction with each lecture showed that nearly 80% of the participants were able to understand and actively participate in the first lecture. However, even when the same course content was conducted, differences in the level of understanding and satisfaction were confirmed depending on the location of the course.

About 70% of the participants were able to understand and actively participate in the second lecture. Regarding the number of times, the participants attended the "Health Promotion Seminar," 61.2% of all participants attended 10 or more times. Regarding the level of satisfaction with each lecture, 77.5% of the participants of the first lecture and 68.5% of the participants of the second lecture reported that they were satisfied with the lectures, indicating that

the participants wanted to sustain their participation in the seminar. This survey allowed us to confirm the key outcomes of the seminar participants. It is hoped that this will lead to improvements in the quality of the seminar content, and if there are any discrepancies between these and the pharmacists' perceptions and awareness, the results will provide specific guidelines and targets for pharmacies to improve patient QoL. This is expected to lead to the brushing up of pharmacists' competencies.

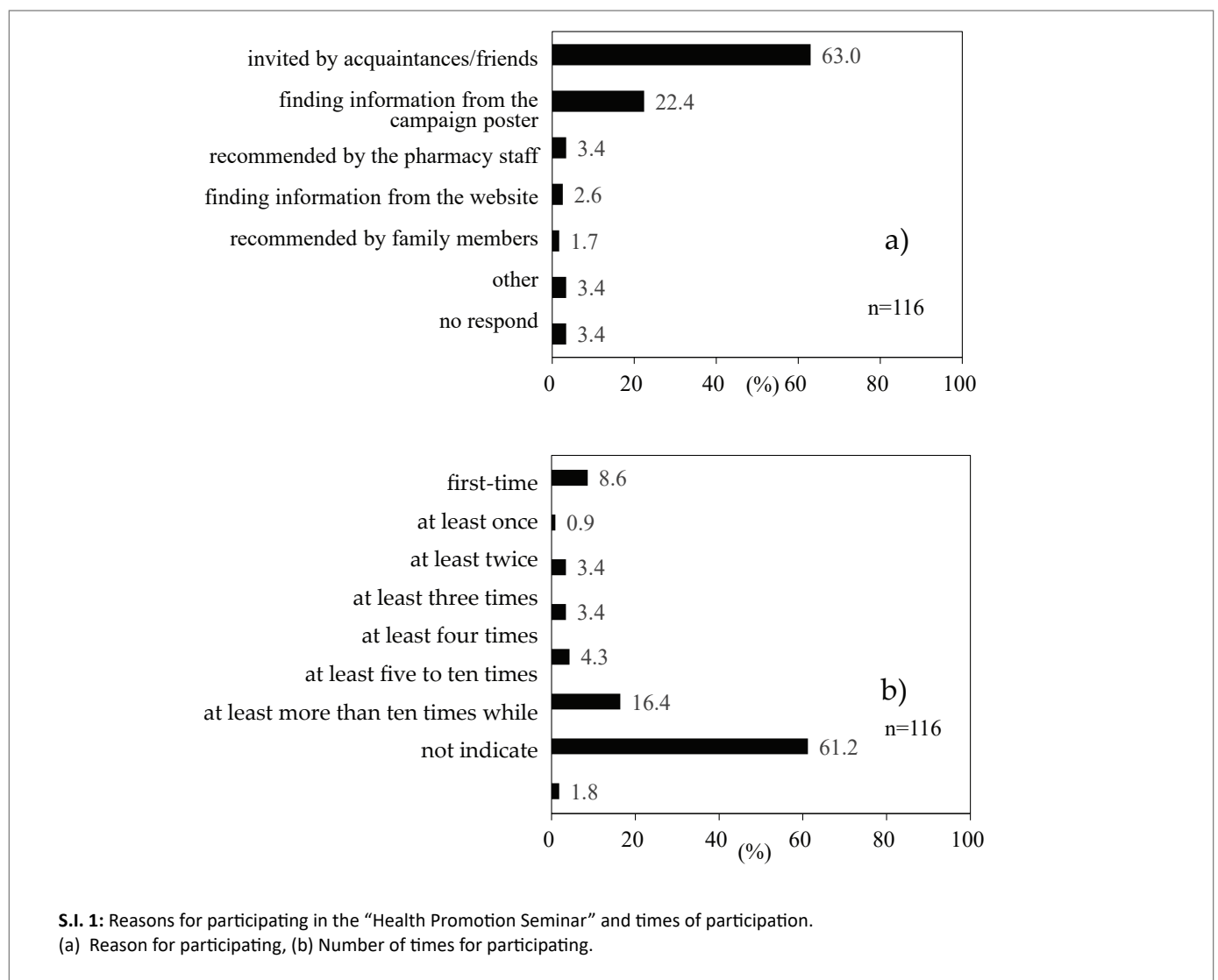
Currently, the "Health Promotion Seminar" consists of an active (participation) lecture in the first lecture and a passive (classroom) lecture in the second lecture, conducted by pharmacists and dietitians. The level of understanding (84.5%) and active participation (86.2%) in the first course were higher than those in the second course (understanding: 80.2%, active participation: 80.2%). When compared to each theme, differences in proactiveness were observed between the dietitian and pharmacist courses. These differences could be attributed to (1) differences in lecture themes, such as health-oriented measures and specialized chemical experiments, and (2) differences in format, such as active lectures and passive lectures. Considering the active participation of the participants, it was thought that switching the content of the first and second lectures would lead to an increase in the number of participants in the lecture-style lectures.

The participants were asked about the proper use of medicines and whether it was an issue they face in their daily lives. In recent years, the approach pharmacists take in engaging patients is not only through the provision of drug information but also guidance on how to take and use prescribed drug products and follow-up referrals after taking their medications [8]. According to the report of Nguyen, the asthma

knowledge training program significantly improved pharmacists. These pharmacists achieved higher scores in all aspects encompassing distinguishing controllers and relievers, counseling correctly about adherence, and common side effects [9]. The reasons believed to be responsible for this were that pharmacists were not prepared to manage the anxiety of patients that the content of instruction was insufficient in terms of drug administration guidance, and that patients did not understand the characteristics of the prescribed drugs. In addition, the fact that many respondents reported numbness and stiffness in their hands and feet, and joint pain as issues other than drug-related issues suggests that a course on diseases specific to population sub-groups (e.g., women) and the urological system would be useful. Therefore, in addition to improving the content of guidance when administering medications, it may be necessary to establish a new course on the proper use of medications as part of the “health promotion seminars”. One of the purposes of pharmacies holding study sessions and health events related to medication is to increase the health literacy of community pharmacy users and the local community. Nutbeam defines health literacy as “the cognitive and social skills that determine an individual’s willingness and ability to access, understand, and use information about how to promote and maintain better health [10]. We believe that education to improve health literacy, which is the

ability to include knowledge and understanding of health and critical thinking about information, is important to attain desirable health behaviors in the aging Japanese population. They also mention that pharmacists need to be satisfied with their work, which includes recognition of professionalism, autonomy, and active collaboration, leading to pharmacy services that have the potential to contribute to broader public health goals [11].

In the community healthcare setting, pharmacists are not only required to support patients through pharmacotherapy but also to contribute through health promotion and extension of healthy life expectancy. Community-based promotion and education activities can clarify the concerns and thoughts of participants and directly lead to solutions to their problems. Japan is an aging society, and there is a growing interest in taking measures to combat more unwellness. Therefore, evaluating satisfaction with health promotion seminars that include pharmacists will be useful in implementing future approaches by pharmacists to improve health literacy among community residents. Based on the results of this study, it is desirable to change the venue and course content of the “Health Promotion Seminar” and provide courses that enable sustainable interactive communication [12]. Note that this study is a survey study of family patients at a specific



pharmacy. Therefore, changes in the times (e.g., the need for services may have changed due to the recent infection pandemic) need to be taken into consideration in the future.

Conclusions

The evaluation of the “Health Promotion Seminar” initiated by community pharmacies in Japan by participants indicated that they were highly satisfied with the seminar. However, there were regional differences in the number of participants, and it was clear that some areas did not provide sufficient information to local community areas near pharmacies. In the future, it is necessary to revise the content of the courses to include the proper use of medicines and the prevention of diseases that can affect daily life, as well as to promote pharmacy education literacy to the local community.

Ethical Consideration

The study was approved by Josai University Ethical Committee in Saitama Japan (HME-2019-21A).

Author Contributions

Y.I. T.T. and N.K. participated in the development of the study design, implemented the study, carried out data collection, and prepared the manuscript. Y.I. M.S and N.K. developed the study design, implemented the study, carried out data collection, analyzed the generated data, prepared the manuscript, and contributed suggestions regarding the manuscript. All authors have read and approved the final manuscript.

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Conflict of Interest

The Authors declare no conflict of interest.

References

1. Iijima K, Arai H, Akishita M, Endo T, Ogasawara K, et al. (2021) Toward the development of a vibrant, super-aged society: The future of medicine and society in Japan. *Geriatr Gerontol Int* 21: 601-613.
2. United Nations (2019) Department of Economic and Social Affairs Population: Dynamics. *World Population Prospects*.
3. Tsuji I (2019) Epidemiologic Research on Healthy Life Expectancy and Proposal for Its Extension: A Revised English Version of Japanese in the Journal of the Japan Medical Association 148: 1781-1784.
4. The Ministry of Health, Labour and Welfare (2018) Statistics of Physicians, Dentists and Pharmacists.
5. The Ministry of Health, Labour and Welfare (2023).
6. Arai H, Ouchi Y, Toba K, Endo T, Shimokado K, et al. (2015) Japan as the front-runner of super-aged societies: Perspectives from medicine and medical care in Japan. *Geriatr Gerontol Int* 15: 673-687.
7. Emmons KM, Gandelman E (2019) Translating behavioral medicine evidence to public policy. *J Behav Med* 42: 84-94.
8. Donabedian A (2005) Evaluating the quality of medical care. 1966. *Milbank Q* 83: 691-729.
9. Nguyen TS, Nguyen TLH, Pham TTV, Cao TBT, Nguyen VK, et al. (2018) Effectiveness of a short training program for community pharmacists to improve knowledge and practice of asthma counselling-A simulated patient study. *Respir Med* 144: 50-60.
10. Nutbeam D (2000) Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International* 15: 259-267.
11. Mishima S, Arakawa N, Bate I, Smith F (2022) Opportunities to demonstrate expertise and job satisfaction of community pharmacists in Japan and England. *Int J Healthc Manag* 15: 287-294.
12. Jeffries M, Keers RN, Belither H, Sanders C, Gallacher K, et al. (2021) Understanding the implementation, impact and sustainable use of an electronic pharmacy referral service at hospital discharge: A qualitative evaluation from a sociotechnical perspective. *PLoS One* 16: e0261153.