Article

Intermediate Care for Patient-Centered Care, Shared Decision Making, and Hospital Discharge Support in a Japanese Acute Care Hospital: A Cross-Sectional Study

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Abstract: [Background] Intermediate care is a limited-time service founded on patient-centered care (PCC) that ensures continuity and quality of care during the transition between home and acute care services, promotes recovery, and restores independence and confidence. In Japan, systematic education on intermediate care for care providers is lacking. [Method] The present study explored the relationship between a Japanese scale used to evaluate individualized discharge support skills, a Japanese version of a tool for evaluating intermediate care based on PCC, and a tool that measures the shared decision making of care providers, which is the pinnacle of PCC. [Results] Clear correlations were found between the concepts evaluated using these three tools. Some concepts were not correlated between the Japanese scale that evaluated individualized discharge support skills and intermediate care based on PCC. [Conclusions] Elucidating the perspectives that help expand discharge care to intermediate care based on PCC will contribute to future education on intermediate care for Japanese care providers and to enriching patient-centered intermediate care.

Keywords: discharge support; acute hospital; intermediate care; patient-centered care; shared decision making

1. Introduction

The populations of the most developed countries are aging [1–3], and the number of patients with chronic diseases and geriatric syndrome that require long periods of care is also increasing [4–6]. However, patients with chronic diseases and geriatric syndromes are at risk of long and repeated hospitalizations [7,8]. Thus, the functions of "intermediate care" are drawing interest as ways to control these risks.

Intermediate care incorporates the concept of patient-centered care (PCC) and has mainly been developing in Europe. The international definition of intermediate care published in 2020 is as follows: "There was an agreement that intermediate care represents time-limited services which ensure continuity and quality of care, promote recovery, and restore independence and confidence at the interface between home and acute services, with transitional care representing a subset of intermediate care. Models are best delivered by an interdisciplinary team within an integrated health and social care system where a single contact point optimizes service access, communication, and coordination" [9]. There are four ways to provide intermediate care [10]. First, intermediate care is provided in the care transition period within the hospital. Second, it is provided as a transitional care intervention, during and within 30 days of discharge. Third, it is provided at home. Fourth, it is provided in a community hospital or facility after acute care has been provided [10]. Intermediate care provided exclusively at home is provided by a nurse and other healthcare professionals to the patient and family, and it has been confirmed to lower the risk of long-term hospitalization [11]. Appropriate transition support from the hospital to the

community, such as monitoring patients after discharge, patient education, and care coordination, has been confirmed to lower the chances of readmission [12]. Interventions exclusively delivered in the acute hospital predischarge included early discharge planning, nurse-led discharge, nurse-led predischarge self-management education, nurse-led postoperative discharge processes that are protocol-driven, an instructional discharge letter from a physician, and discharge medication planning; associations were found between early discharge planning and the reduction in the number of readmissions, and readmission, in turn, has been associated with much shorter hospital stays [13].

Intermediate care refers to patient-centered, integrated care adapted to physical conditions specific to older adults and people with various chronic diseases [9]. Given that the Japanese population is aging at an alarming rate and shrinking in overall size [14], preventing unnecessary readmission to hospitals; establishing intermediate care, which shortens hospital stay; and ensuring quality of care are important to allocate the limited healthcare resources optimally to older patients. However, the concept of intermediate care has not spread in Japan, and PCC education is also limited [15,16]. Nevertheless, in Japan, wards with intermediate care services, namely, a convalescence rehabilitation ward (Kaifukuki Rehabilitation Ward: "K-ward") [17] and a community-based care ward ("C-ward") [18], are implemented as policies. A "K-ward" and a "C-ward" provide hospital discharge support, and various instruments have been developed to improve the quality of hospital discharge support care [19–31].

In Europe and other countries, discharge support has been developed deductively, with policies and practices being developed after the concept of patient-centered intermediate care had been established. In Japan, however, discharge support has been developed in an inductive manner, as it has been implemented based on issues in the medical field, and information on these efforts has been accumulated and made into policy. In a global trend where respect for human rights is emphasized, it is necessary to clarify what differences or commonalities exist between the concept of patient-centered intermediate care and the concept of discharge support developed independently in Japan in order to develop a global standard of patient-centered intermediate care in Japan in the future. This is necessary in order to develop a global standard of patient-centered intermediate care in Japan in the future.

However, the concept of intermediate care is not widespread in Japan, and PCC education is also limited, such that no measure of intermediate care has been founded on the PCC principle yet, unlike in Europe. Contrarily, Japanese researchers are becoming increasingly aware of the concept of PCC and the need for intermediate care services, and the concept of PCC is expected to be widely applied to the general population in the future. In the context of the global social relevance of respect for human rights, it is inevitable that patient-centered intermediate care will become necessary in Japan in the future. In order to promote the development of patient-centered intermediate care in Japan, we have to clarify the differences or similarities between Japan's traditional concept of discharge support and the global mainstream concept of patient-centered intermediate care. This will help to build a theoretical foundation for patient-centered intermediate care that can be adapted to Japan, and will lead to the development of patient-centered intermediate care research in Japan in the future.

To expand on and actualize patient-centered hospital discharge support practice, the conceptual relationship between the current Japanese hospital discharge support and PCC must be explored as the underlying theory of intermediate care to obtain suggestions for developing PCC as foundations in intermediate care. Thus, the present study aimed to explore the relationships between the concepts of intermediate care shared decision making (SDM) as the pinnacle of PCC [32] and the concept of individualized discharge support that developed independently in Japan.

2. Materials and Methods

2.1. Study Design and Setting

This cross-sectional study used a questionnaire survey on nurses working in wards with intermediate care functions ("K-ward" and "C-ward") in a national center specialized in geriatrics.

2.2. Instruments

2.2.1. Nurses' Discharge Planning Ability Scale

The Nurses' Discharge Planning Ability Scale (NDPAS) [19], a scale created based on a competency theory that evaluates discharge support ability, was developed and published by Japanese researchers in 2013, and its reliability and validity have been confirmed in clinical practice in Japan. It comprises a discharge support process and collaboration with multiple professionals both within and outside the hospital and evaluates their individual support skills. The conceptual structure to be measured consists of 24 items in one dimension and four factors (the ability to assess care requirement after discharge, consensus-building ability with patient and family, ability to adjust a care balance after discharge, and ability to prepare for transition to the place of care). The questions are answered using a five-level Likert scale ranging from "completely unable" to "completely able" [19]. It has already been used in multiple Japanese studies related to discharge support [33–35]. In the present study, the NDPAS was used as a tool to help visualize the concept of discharge support in Japan.

The 24-item NDPAS is answered using a five-level Likert scale ranging from "not at all" (0) to "completely able" (4) (to perform the nursing skill evaluated).

The total score was multiplied by 25/24 and converted to 100 for analysis.

2.2.2. SDM-C Japanese (Care Staff) (Supplementary File S1)

SDM-C Japanese (care staff) is an index for the care staff when answering the SDM [27,32–35], which is the pinnacle of PCC. The SDM-C Japanese (care staff) is the Japanese translation of the SDM-C, and its internal consistency and conceptual validity have been confirmed in Japanese clinical practice.

Factor 1 is composed of nine items, and all questions are answered using a six-level Likert scale ranging from "completely disagree" to "completely agree". In the present study, the questionnaire was used to answer the questions about decision-making support in discharge support.

The SDM-C Japanese (care staff) consists of nine questions, and all responses are based on a six-level Likert scale. "Completely disagree" was replaced with 0, and "completely agree" was replaced with 5, and the data were analyzed by multiplying the total responses by 20/9 to convert them to 100.

2.2.3. Japanese Version of Patient Reported Experience Measures (Bed Based) Modified for Care Providers (Supplementary File S2)

The Japanese version of the Patient Reported Experience Measures (PREM; bed based), developed in the UK, evaluates the quality of intermediate care [36,37]. The original version of the PREM was developed using the Picker Institute's Eight Principles of PCC as the basic theory, and a patient assessment comprising 15 items was used to measure the quality of intermediate care [37].

The eight principles of PCC are as follows: respect for patients' values, preferences, and expressed needs; coordination and integration of care; information, communication, and education; physical comfort; emotional support and alleviation of fear and anxiety; involvement of family and friends; continuity and transition; and access to care [38].

The original version of the PREM was developed by the UK's National Health Service (NHS) and used for intermediate care evaluations in the UK [37]. It has been translated into Italian as well [39].

In Japan, there is no concept of intermediate care, and an intermediate care evaluation index based on PCC that can be used by care providers is lacking; thus, we prepared a tool that allows care providers to use the Japanese version of the PREM (bed based) on a trial basis.

The Japanese version of the PREM (bed based) adapted for care providers was developed by changing the expressions of questions and answers for intermediate care researchers, ward managers with intermediate care functions ("K-ward" and "C-ward"), and nurse managers.

For the Japanese version of the PREM (bed based) modified for care providers, all items, except for the Japanese version of PREM item 6, were scored as "present", a phenomenon that occurred was scored with "absent", and "I do not know" was set at 0. However, the Japanese version of PREM item 6 is answered on a two-level Likert scale, and considering that "present" is a negative phenomenon, "absent" was set to 1 and "present" was set to 0. For the statistical analysis, the Japanese version of the PREM was analyzed by multiplying the score by 20/3; thus, the total score of the answers to all 15 questions was 100.

The PREM Japanese version (bed-based), converted to 100 and adjusted for care providers, was compiled into descriptive statistics in the response data. Descriptive statistics were calculated for the median, minimum, maximum, variance, mean, and standard deviation for each of the 15 items.

The variance was the difference between the value of each item and the mean squared. The variance was described along with the standard deviation to indicate the amount of variation in the data for each item.

The concepts evaluated using the Japanese version of the PREM (bed based) adapted for care providers were checked using the following method: with a sample size ≥ 100, construct validity was confirmed through exploratory and confirmatory factor analyses, and internal consistency was confirmed by calculating the Cronbach's alpha coefficient, using the Consensus-based standards for selection of health measurement instruments (COSMIN) [40] as a reference.

2.2.4. Demographic Data

Data on the participants' age, gender, clinical experience, and final educational attainment were collected.

2.3. Participants and Setting

This study targeted nurses working at one acute hospital with a "K-ward" and "C-ward" specializing in geriatrics between December 2020 and August 2022.

The instruments were distributed to the nurses by the head nurse just before the patients were discharged from the hospital. After a patient was discharged, a nurse answered the questionnaire anonymously of their own free will and submitted the completed questionnaire in a sealed anonymous envelope.

2.4. Ethical Considerations

This study was conducted after a strict conflicts of interest and research ethics review and approval by the National Center for Geriatrics and Gerontology (approval code no. 1434, 14 September 2020).

2.5. Rules of Analysis

The NDPAS and SDM-C Japanese (care staff) of the collected questionnaires and the Japanese version of the PREM (bed based) modified for care providers were excluded from the analysis if no more than 31% of all questions in each questionnaire were answered. Where responses were missing for the NDPAS and SDM-C Japanese (care staff) and the Japanese version of the PREM (bed based) modified for care providers, the median value of the corresponding item was substituted for analysis.

For demographic data, missing values were treated as "no response".

The NDPAS, SDM-C Japanese (care staff), and the Japanese version of the PREM (bed based) modified for care providers were used to summarize the response rates and results.

To explore the relevance of the concepts of hospital discharge support, SDM, and intermediate care for PCC, we first converted the scores of the three types of tools to 100.

2.6. Statistical Analyses

In the exploratory factor analysis, we first measured the Kaiser–Meyer–Olkin (KMO) sampling adequacy and determined that sampling was appropriate if the KMO was ≤0.6. Next, we performed a factor analysis using the principal factor method to explore the number of latent factors and factor structure.

We then confirmed the conceptual structure using structural equation modeling (SEM) as a confirmatory factor analysis. The fit of SEM was determined by the chi-squared value ($p > 0.05$), goodness-of-fit index (GFI) ≥ 0.85, adjusted goodness-of-fit index (AGFI) ≥ 0.85, root mean square error of approximation (RMSEA) ≤ 0.05, and comparative goodness-of-fit index (CFI) ≥ 0.95, and the suitability was determined to be high.

To confirm the concurrent validity, Spearman's rank correlation coefficient was calculated for the total scores of the Japanese version of PREM (bed based) modified for care provider responses and SDM-C Japanese (care staff) to calculate the correlation. An r of 0.2–0.3 was deemed weak, r = 0.4–0.6 was deemed moderate, and r $\geq$ 0.7 was deemed to have a strong correlation when significance was set at $p < 0.05$.

Internal consistency was confirmed by calculating the Cronbach's α and McDonald's ω coefficients. Values of $\alpha \geq 0.75$ and $\omega \geq 0.80$ were defined as internally consistent.

Next, the Spearman's rank correlation coefficient was calculated from the total scores of the NDPAS, the SDM-C Japanese (care staff), and the Japanese version of the PREM (bed based) modified for care providers to test the correlations. The Spearman's rank correlation coefficient was calculated for four factors of the NDPAS, one factor of the SDM-C Japanese (care staff), and factors of the Japanese version of the PREM (bed based) modified for caregivers to test the correlation.

Regarding the significance probability ($p < 0.05$), weak, moderate, and strong correlations were defined as r = 0.2–0.3, 0.4–0.6, and $\geq$0.7, respectively.

Finally, SEM was used to visualize and analyze the relationships between the concepts of the four factors of the NDPAS, SDM-C Japanese (care staff), and factors of the Japanese version of PREM (bed based) adapted for caregivers. The SEM model was defined such that the χ2 value ($p > 0.05$), GFI ≥ 0.85, AGFI ≥ 0.85, RMSEA ≤ 0.05, and CFI ≥ 0.95 were defined as a good fit.

IBM SPSS Statistics 29 and IBM SPSS Amos Graphics 29 (IBM Corp., Armonk, NY, USA) were used for the statistical analyses.

3. Results

Data were extracted from 292 participants, and the data of 286 participants (97.9%), whose missing responses to the Japanese version of the PREM modified for care providers and the SDM-C Japanese were ≤30% for each questionnaire, were used for the analysis.

3.1. Participants' Characteristics

Respondent data were obtained from 132 nurses (46.2%) discharged from the "C-ward" and 154 (53.8%) nurses discharged from the "K-ward". The largest proportion of respondents were women in their forties. The respondents had varied clinical experiences (Table 1).

Table 1. Participants' characteristics (N = 286).

Category	Response Choices	n	Percentage
Age group	20s	78	27.3
	30s	32	11.2
	40s	106	37.1
	50s	68	23.8
	No response	2	0.7
Gender	Female	274	95.8
	Male	10	3.5
	No response	2	0.7
Final level of education completed	<5 years	43	15.0
	≥5 years, <10 years	53	18.5
	≥10 years, <15 years	54	18.9
	≥15 years, <20 years	53	18.5
	≥20 years, <25 years	50	17.5
	≥25 years, <30 years	25	8.7
	No response	8	2.8

3.2. Response Results for Japanese Version of PREM Modified for Care Providers (Bed Based)

The results of the Japanese version of the PREM modified for care providers (bed based) are summarized in Table 2.

Table 2. The results of the responses to the Japanese version of the PREM modified for care providers (N = 286).

Items	Response Choices	n	%
Care provider PREM item 1 Was the patient admitted within a reasonable amount of time?	Yes	270	94.4
	No	16	5.6
Care provider PREM item 2 Did you collect all the necessary data about the patient's condition or disease from the referring physician?	Yes	183	64.0
	No/I do not know	103	36.0
Care provider PREM item 3 Did you clearly state the patient's care objectives?	Yes	228	79.7
	No/I do not know	58	20.3
Care provider PREM item 4 Did you think about the home care objectives by discussing them with the patient?	Always	150	50.4
	Sometimes	115	40.2
	No	21	7.3
Care provider PREM item 5 Was the room and spaces shared by the patient clean?	Very clean	99	34.6
	Somewhat clean	181	63.3
	Not very clean	6	2.1
Care provider PREM item 6 While using the service, did the patient experience fear and other unpleasant things from other users or visitors?	No	244	85.3
	Yes	42	14.7
Care provider PREM item 7 Did you respond thoroughly to the patient's questions?	Yes	172	60.1
	Sometimes	82	28.7
	The patient had no questions	31	10.8
	No	1	0.3
Care provider PREM item 8 Did you feel that the patient trusted you?	Yes	92	32.2
	Somewhat	171	59.8
	No	23	8.0
Care provider PREM item 9 Was the patient involved in care- and treatment-related decision-making to their satisfaction?	Yes	242	84.6
	No	44	15.4

Table 2. *Cont.*

Items	Response Choices	n	%
Care provider PREM item 10 Was the patient involved in decision-making as to when to move back home?	Sufficiently	113	39.5
	Somewhat	138	48.3
	Involvement was not necessary	24	8.4
	Involvement was not possible	11	3.8
Care provider PREM item 11 In planning home care, did you take the patient's or family's home situation into account?	Sufficiently	129	45.1
	Somewhat	136	47.6
	Taking it into account was not necessary	18	6.3
	Could not be taken into account	3	1.0
Care provider PREM item 12 Did you sufficiently disclose information related to the patient's care to the patient's family and close friends?	Sufficiently	131	45.8
	Somewhat	127	44.4
	Patient disagreed to disclosure/Disclosure was unnecessary	16	5.6
	No	12	4.2
Care provider PREM item 13 Did you discuss with the patient the assistive tools and medical devices for care at home?	Yes	170	59.4
	Discussion was not necessary	89	31.1
	Discussion was not possible	27	9.4
Care provider PREM item 14 Did you discuss sufficiently with the patient the necessity of receiving care or support after discharge?	Yes	197	68.9
	Discussion was not necessary	63	22.0
	Discussion was not possible	26	9.1
Care provider PREM item 15 Overall, did you provide the patient with care and respect during hospital stay?	Yes	257	89.9
	Sometimes	27	9.4
	No	2	0.7

3.3. Descriptive Statistics of NDPAS by Factor

The scores to the responses to each of the NDPAS items were converted to 100 and divided into four factors to summarize the descriptive statistics (Table 3).

Table 3. Descriptive statistics based on factor of NDPAS items (N = 286).

Factor	NDPAS Items	Mean	Median	SD	Variance	Minimum	Maximum
Ability to estimate post discharge care balance (6 items)	• I visualize the "whole picture" and flow of support to discharge at the early stage of support. • I predict the medical management and daily living support needed by the patient after discharge. • Consider the patient's post-discharge course and anticipate the likelihood of continued care by family members.	18.371	18.75	2.952	8.712	9.375	25.000

Table 3. *Cont.*

Factor	NDPAS Items	Mean	Median	SD	Variance	Minimum	Maximum
	• I collect information on the patient's living environment after discharge. • I quickly obtain information about the medical care needed by the patient after discharge and medical facilities and visiting nurses who will provide it. • I assess whether the medical management and care needed by the patient after discharge can be provided by the patient's family and community resources.						
Ability to build consensus with the patient/family (7 items)	• I check on the patient's/family's understanding of the patient's condition and disease course after discharge. • I collect information on the sources of any anxiety the patient/family may have at discharge. • I provide information so that the patient/family can understand the amount of care needed after discharge. • I evaluate whether the family members intend to be the caregivers. • I create a realistic care plan that considers the patient's/family's wishes. • I encourage the patient/family so that they can make their decision about the discharge plan and preparation independently. • I resolve any disagreements between the patient's/family's wishes and the medical staff's policies.	21.514	21.875	3.477	12.087	10.417	29.167
Ability to coordinate post discharge care balance (6 items)	• I coordinate with the hospital staff regarding the medical management and care needed during the hospital stay to reduce the burden on the patient/family after discharge. • I support with hospital staff to help patients maximize their level of independence (ADLs and ability to self-care) during hospitalization.	17.858	18.750	3.336	11.129	5.208	25.000

Table 3. *Cont.*

Factor	NDPAS Items	Mean	Median	SD	Variance	Minimum	Maximum
	• I try to come up with creative teaching methods with the hospital staff and other professionals so that the patient/family can easily learn about medical management and care methods. • I select the necessary members among the hospital staff for the discharge support depending on the patient's condition. • I share the discharge-oriented objectives with the hospital staff involved in the patient's discharge support. • I coordinate with the community staff so that they can master the skills for medical management and care that they have never previously experienced.						
Ability to prepare for the transition of place of care (5 items)	• I am aware of the application procedures and waiting times for the approval of medical/welfare system services that the patient/family needs to apply for. • I contact medical facilities and visiting nurses who can provide medical management and care necessary for discharge in a timely manner. • I coordinate with the family and care manager so that the postdischarge care environment can be prepared before discharge. • I select the mode of transportation needed for the patient to return home after discharge according to the patient's condition. • I coordinate with the members of joint conferences so that the patient/family, hospital staff, and other personnel can all attend to meet the objectives of the conference.	14.212	15.625	3.368	11.344	0	20.833

3.4. The Results of the Descriptive Statistics of the Japanese Version of the PREM (Bed Based) Modified for Care Providers

The descriptive statistics of the answers to the Japanese version of the PREM (bed based) modified for care providers are summarized in Table 4.

Table 4. Descriptive statistics for Japanese version of PREM modified for care providers (bed based).

Items	Median	Minimum Value	Maximum Value	Dispersion	Mean	Standard Deviation	Mode
Care provider PREM item 1	1.000	0	1.000	0.053	0.944	0.230	6.67
Care provider PREM item 2	1.000	0	1.000	0.231	0.640	0.481	6.67
Care provider PREM item 3	1.000	0	1.000	0.162	0.797	0.403	6.67
Care provider PREM item 4	1.000	0	1.000	0.099	0.726	0.315	6.67
Care provider PREM item 5	0.500	0	1.000	0.066	0.663	0.256	3.33
Care provider PREM item 6	1.000	0	1.000	0.126	0.853	0.355	6.67
Care provider PREM item 7	1.000	0	1.000	0.054	0.829	0.233	6.67
Care provider PREM item 8	0.500	0	1.000	0.086	0.621	0.294	3.33
Care provider PREM item 9	1.000	0	1.000	0.131	0.846	0.361	6.67
Care provider PREM item 10	0.670	0	1.000	0.064	0.746	0.254	4.47
Care provider PREM item 11	0.670	0	1.000	0.047	0.790	0.216	4.47
Care provider PREM item 12	0.670	0	1.000	0.065	0.774	0.254	6.67
Care provider PREM item 13	1.000	0	1.000	0.110	0.750	0.332	6.67
Care provider PREM item 14	1.000	0	1.000	0.106	0.799	0.325	6.67
Care provider PREM item 15	1.000	0	1.000	0.028	0.946	0.167	6.67

3.5. Construct Validity of Japanese Version of PREM Modified for Care Providers (Bed Based)

The KMO was 0.867, thereby indicating the validity of sampling. Three factors with an eigenvalue ≥ 1 were extracted by factor analysis using the principal factor method, but based on the scree plot results and the two-factor structure of the Japanese version of the PREM (bed based), the number of factors was fixed at two. Next, a factor analysis (principal factor method) using promax rotation was performed again.

The factor loadings for one factor other than care provider items 1 and 6 were ≥ 0.4. The first factor was named "Patient centeredness", and it hypothesized a relationship with care provider items 1–15. The second factor was named "Management of beds" and hypothesized a relationship with care provider item 1. This structure was different from the patients' answers to the Japanese version of the PREM (bed based) [36].

A model showing no residual correlation between the two factors and 15 items showed a poor model fit ($\chi^2 = 297.439$, $p < 0.001$, GFI = 0.880, AGFI = 0.841, RMSEA = 0.089, and CFI = 0.848).

A model constructed assuming a residual correlation turned out to be satisfactory ($\chi^2 = 79,288$, $p = 0.407$; GFI = 0.965, AGFI = 0.945, RMSEA = 0.010, and CFI = 0.998) (Figure 1).

The Spearman's rank correlation coefficient of r = 0.651 ($p < 0.001$) was calculated from the total scores of the 15-item Japanese version of the PREM modified for care providers (bed based) and the SDM-C Japanese (care staff). These results confirmed a moderately significant correlation and that the Japanese version of the PREM modified for care providers (bed based) adequately measured intermediate care based on PCC.

Cronbach's α and McDonald's ω coefficients were calculated to confirm the internal consistency of the Japanese version of the PREM modified for care providers (bed based), resulting in $\alpha = 0.818$ and $\omega = 0.964$, confirming adequate internal consistency.

These results confirmed the reliability and validity of the Japanese version of the PREM modified for care providers (bed based), which has a 15-item structure and measures patient-centered intermediate care.
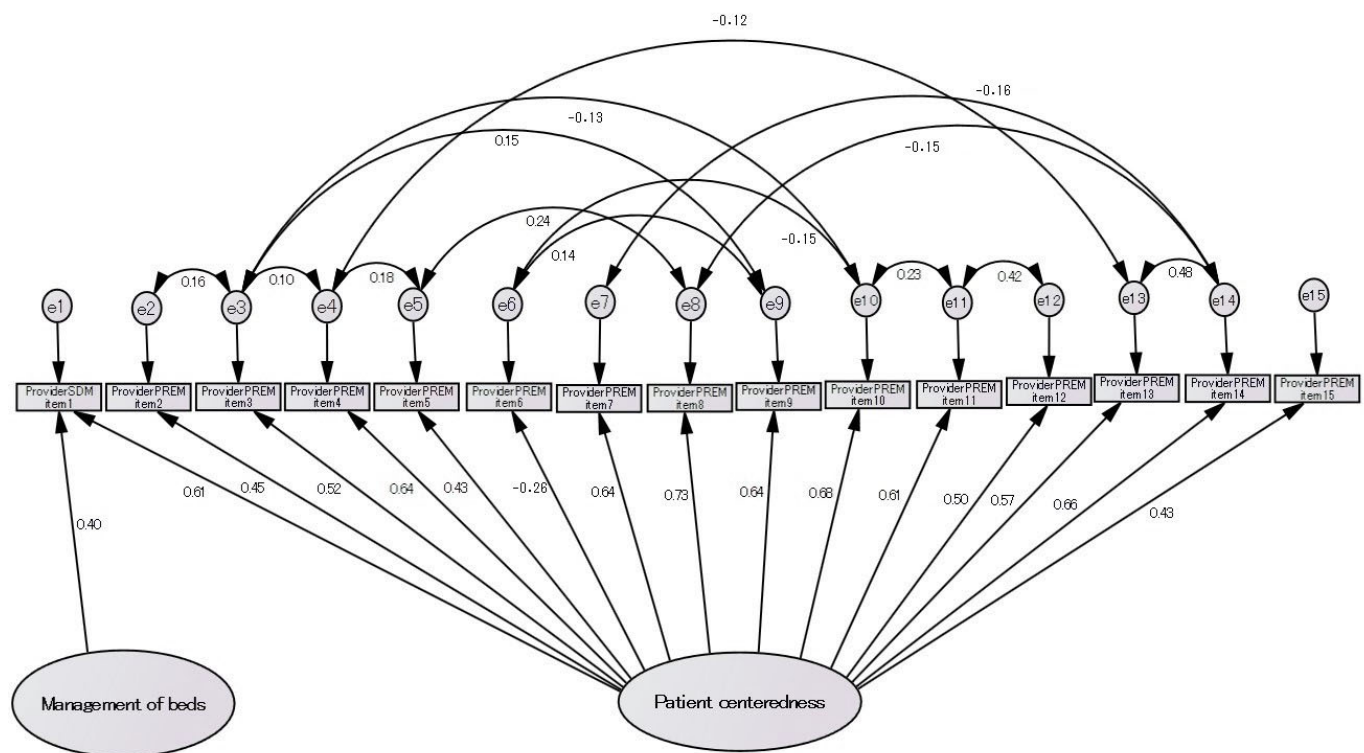
Figure 1. A hierarchical factor analysis model with a two-factor structure with a residual correlation.

3.6. Verification of Correlation between NDPAS, PREM (Bed Based), and SDM-C Japanese (Care Staff)

The Spearman's rank correlation coefficient was calculated from the total scores of the NDPAS, Japanese version of the PREM modified for care providers (bed based), and SDM-C. The correlation coefficient between the NDPAS and SDM-C was 0.566 ($p < 0.001$), and that between the NDPAS and Japanese version of the PREM modified for care providers (bed based) was 0.562 ($p < 0.001$), showing a significant moderate correlation.

Next, Spearman's ranked correlation coefficient was calculated from the four factors of the NDPAS, the total scores of the two factors of the Japanese version of the PREM modified for care providers (bed based) (patient centeredness and management of beds), and one factor of the SDM. Significant moderate correlations were found among all of the four factors of the NDPAS, SDM, and "Patient centeredness" of the Japanese version of the PREM modified for care providers (bed based).

For the correlations between "Management of beds" in the Japanese version of the PREM modified for care providers (bed based) and four factors of the NDPAS, mild correlations were found only in the ability of building consensus with the patient/family ($r = 0.160$, $p = 0.007$) and the ability to coordinate post discharge care balance ($r = 0.173$, $p = 0.003$). Significant moderate correlations were found in the one-factor structure SDM-C Japanese (care staff) that measures the SDM of care providers and the four factors of the NDPAS (Table 5).

Table 5. The Spearman's rank correlation coefficient of the two factors of the Japanese version of the PREM modified for care providers (bed based), four factors of the SDM-C Japanese (care staff), and four factors of the NDPAS.

	Japanese Version of PREM Modified for Care Providers (Bed Based) Patient Centeredness	Japanese Version of PREM Modified for Care Providers (Bed Based) Management of Beds	SDM-C Japanese (Care Staff)
NDPAS Ability to build consensus with the patient/family	r = 0.524 **	r = 0.160 **	r = 0.548 **
NDPAS Ability to estimate post discharge care balance	r = 0.518 **	r = 0.101	r = 0.543 **
NDPAS Ability to coordinate post discharge care balance	r = 0.486 **	r = 0.173 **	r = 0.490 **
NDPAS Ability to prepare for the transition of place of care	r = 0.455 **	r = 0.077	r = 0.452 **

** $p < 0.001$.

3.7. Exploring the Relationship between the Conceptual Factors of the NDPAS, the Japanese Version of the PREM Modified for Care Providers (Bed Based), and the SDM-C Japanese (Care Staff)

Based on the correlation between each concept and the conceptual structure of the Japanese version of the PREM modified for care providers (bed based), we hypothesized that the latent factor of "Intermediate care in Japan" would be related to all four factors of the NDPAS, two factors of the Japanese version of the PREM (bed based) modified for care provider responses, and one factor of SDM-C Japanese (care staff). However, because the model fit was low, a model with a high fit was created by assuming causal relationships and residual correlations between factors (Figure 2).
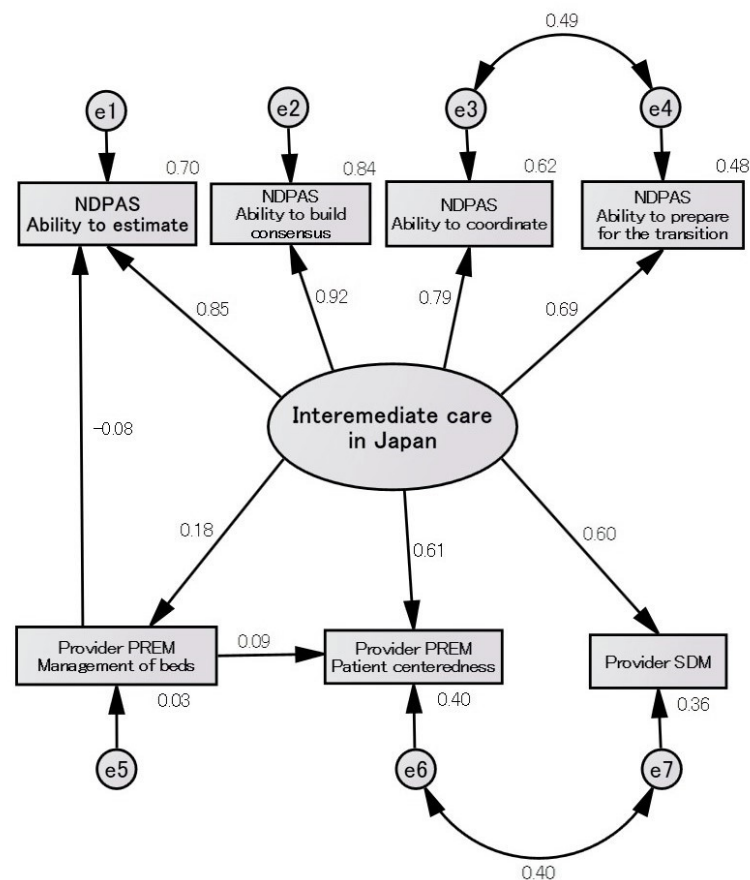

Figure 2. Relationships between the conceptual factors of the NDPAS, the Japanese version of the PREM modified for care providers based on patient-centered care (bed based), and the SDM-C Japanese (care staff).

We obtained the following results: $\chi^2 = 3.003$ ($p = 0.981$), GFI = 0.997, AGFI = 0.992, RMSEA = 0.000, and CFI = 1.000. These results show a very good model fit.

4. Discussion

The purpose of this study was to explore the relationship between intermediate care, shared decision making (SDM) as the pinnacle of PCC, and individualized discharge support fostered and developed in Japan.

4.1. What Are the Relationships between the Conceptual Factors of Discharge Support with the Consideration of Individuality in Japan, Patient-Centered Intermediate Care, and Shared Decision Making?

The PREM (bed based) evaluates intermediate care founded on PCC principles, and it is used in the UK to evaluate the quality of intermediate care [38]. The Japanese version of the PREM was created [36] and has been confirmed to assess intermediate care founded on PCC, similar to the original version. This was experimentally modified so that it can be answered by care providers, and our research data confirmed its reliability and validity. Regarding its conceptual structure, it has a two-factor structure, similar to the Japanese version of the PREM (bed based) which was designed to be answered by patients, but its difference from the other tool is its 15-item and two-latent factor structure.

The 14 items between items 2 and 15 were summarized in one latent factor of "Patient centeredness", but item ("Was the patient admitted within a reasonable amount of time?") was related to two new latent factors, "Management of beds" and "Patient centeredness".

Japan has introduced the "free access" system to medical care [41], i.e., patients can seek medical care at their own preferred timing and will. However, transfer from acute care hospitals (or wards) to hospitals (or wards) providing intermediate care, or whether or not they can transfer to such intermediate care facility, is rarely determined by the patient's preference or preparedness for discharge; rather, it is determined through inter-hospital administrative coordination in usual cases. In the Japanese medical system, on-site care providers are rarely involved in the management of a patient's transfer to a new facility or ward. This suggests that Japanese care providers may not recognize that coordinating when the patient is transferred into an intermediate care hospital (ward) is part of the care they provide, and that this may be why item 1 did not converge into "Patient centeredness".

Given that item 1 in the original Japanese version of PREM (bed based), which is intended for patient respondents, did not converge into the latent factor of "Patient centeredness" either [36], transfer to an intermediate care hospital or ward is suggested to not be recognized by care providers as a part of PCC. This is an important point that should be considered in the process of improving patient-centered intermediate care in the future in Japan.

The present study used the NDPAS, which is a tool based on the competency theory developed in Japan to evaluate discharge support skills, the Japanese version of the PREM (bed based) modified for care providers, which was developed in Japan and founded on the PCC theory, and the SDM-C Japanese (care staff) to test the relationships between their concepts. We aimed to test the hypothesis that discharge care provided in Japan meets the intermediate care criteria and explored the convergence of discharge care given in Japan to PCC.

The analysis showed a clear relationship between the NDPAS and intermediate care concepts based on the PCC theory. A clear correlation was found between "Patient centeredness", a part of the intermediate care concept, and the SDM and NDPAS, demonstrating that individualized discharge support provided in Japan may overlap with the concept of patient-centered intermediate care.

However, a part of the concept of intermediate care, "Management of beds", and the NDPAS only showed a weak correlation with some latent factors, suggesting that to improve the quality of discharge care in patient-centered intermediate care in Japan in the future, it is necessary to set up a system that allows for coordination when deciding when to transfer a patient to an intermediate care hospital (ward) according to the patient's

condition or level of preparedness for discharge. Furthermore, it is important to recognize that this is not just a task for care staff providing intermediate care, but that it is a shared responsibility and should be discussed with care providers of the acute care systems as well.

Intermediate care refers to care provided to patients receiving acute phase treatment [10]. The United Kingdom, a leader in intermediate care, makes clear the importance of discussing with patients when to initiate intermediate care services and how to plan for them [42].

A lack of room for acute care patients to make their own decisions related to convalescence [43] and limitations in providing tailored options to the patients [44] has been reported. Given such limitations in acute care, it is undeniable that the choice of when to transfer a patient to an intermediate care hospital or ward is excluded from the notion of "Patient centeredness", and that it is desirable to incorporate this into a patient-centered system in the future.

4.2. Developing Patient-Centered Intermediate Care in Japan

The Japanese population enjoys the luxury of more hospitals and beds compared with those in other developed countries, and 80% of the hospitals in Japan are privately owned [45]. Furthermore, the Japanese universal health care insurance system ensures that its entire population can receive insurance-covered medical care [46]. The government regularly revises the remunerations for insured medical care [47], and the number of hospital beds and other factors are controlled in this manner. Approximately 30% of the Japanese population now comprises older adults; hence, the main health care needs are shifting from acute care to convalescence, such as in-home care, and the government has accordingly been implementing policies to reduce the number of acute care hospitals and wards and increase hospitals and wards that support convalescence cases [47].

As such, Japan is in the middle of a systemic transition of hospital functions; however, it is doing so without the concept of intermediate care. Moreover, the policies aim to restructure the hospital functions of four categories, namely, "advanced acute phase function", "acute phase function", "convalescence phase function", and "chronic phase function", shifting their relative proportions and building a coordination system among them [48].

Improved intermediate care is also expected to change acute-phase-dependent medicine [49].

The four ways of providing intermediate care are as follows: (1) only in the hospital in the care transition period, (2) as a transition care intervention at discharge and until 30 days of discharge, (3) interventions provided at home, and (4) in community hospitals and facilities after the completion of acute phase care [10]. These four types of intermediate care exist in Japan as well. However, a common notion of intermediate care or shared-care human resources development is lacking, which has created an environment with poor mobility of care personnel.

However, as the population ages at an ever-accelerating rate and the birthrate declines, the applications of intermediate care, which seeks to prevent readmission, have become increasingly important to encourage the autonomy of patients who have completed acute care. Given this social context in Japan, providing patient-centered intermediate care education to care personnel who work in various settings with intermediate care functions already existing in Japan may help to develop patient-centered intermediate care by sharing the purpose of care. It has been suggested that intermediate care contributes to shorter hospital stays and manageable readmissions, and it is expected to lead to the development of a healthcare system that supports Japan's goal of care [50].

The present study experimentally created a Japanese version of the PREM (bed based) for care providers by adapting the Japanese version of the PREM (bed based) for patients to allow care providers to understand intermediate care.

The responses to the Japanese version of the PREM (bed based) for care providers were obtained from 292 nurses in two wards of a hospital specialized in geriatric care that

provides intermediate care. Of the 292 respondents, 286 (97.9%) had analyzable data. The construct validity and internal consistency were also confirmed, suggesting that it could be used as an educational tool for Japanese care providers to understand intermediate care. This study experimentally created the Japanese version of the PREM (bed based) for care providers and suggested the potential of the PREM (bed based) for care providers as a tool for Japanese care providers to understand intermediate care through further discussions with the authors of the original PREM.

4.3. Limitations

The present study has several limitations. First, the data were biased because they were collected from only two wards of a hospital providing intermediate care and specializing in geriatric care. Second, the data collection period was only 21 months, specifically from December 2020 to August 2022, which occurred during the global COVID-19 pandemic. Therefore, it is possible that the system for providing care was different from usual. The study should be repeated in multiple facilities that also offer intermediate care after the COVID-19 measures are lifted to test the concepts.

5. Conclusions

The analysis showed a clear correlation between the individualized discharge support skills in Japanese healthcare settings, patient-centered intermediate care, and SDM, which is the pinnacle of PCC. Nonetheless, our data reveal that the decisions about when to transfer patients to hospitals and wards providing patient-centered intermediate care were, in fact, not patient-centered, and were rather managed by the hospitals in Japan. In order to develop patient-centered intermediate care in Japanese wards with intermediate care functions, it is clear that care staff must consult with patients and position the initiation of intermediate care functions as part of their care depending on the patients' conditions.

References

1. United Nations Aging of the World Population. 2009. Available online: https://www.un.org/en/desa/world-population-ageing-2009 (accessed on 23 January 2024).
2. WHO Official Homepage, Ageing and Health. Available online: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health (accessed on 23 January 2024).
3. Centers for Disease Control and Prevention. Alzheimer's Disease and Healthy Aging. Available online: https://www.cdc.gov/aging/olderadultsandhealthyaging/index.html (accessed on 23 January 2024).
4. WHO. Monitoring Health for the SDGs Sustainable Development Goals. 2023. Available online: https://cdn.who.int/media/docs/default-source/gho-documents/world-health-statistic-reports/2023/world-health-statistics-2023_20230519_.pdf (accessed on 23 February 2024).
5. Thomas, S.A.; Browning, C.J.; Charchar, F.J.; Klein, B.; Ory, M.G.; Bowden-Jones, H.; Chamberlain, S.R. Transforming Global Approaches to Chronic Disease Prevention and Management Across the Lifespan: Integrating Genomics, Behavior Change, and Digital Health Solutions. *Front. Public Health* **2023**, *11*, 1248254. [CrossRef] [PubMed]
6. Sanford, A.M.; Morley, J.E.; Berg-Weger, M.; Lundy, J.; Little, M.O.; Leonard, K.; Malmstrom, T.K. High Prevalence of Geriatric Syndromes in Older Adults. *PLoS ONE* **2020**, *15*, e0233857. [CrossRef] [PubMed]
7. Le Berre, M.; Maimon, G.; Sourial, N.; Guériton, M.; Vedel, I. Impact of Transitional Care Services for Chronically Ill Older Patients: A Systematic Evidence Review. *J. Am. Geriatr. Soc.* **2017**, *65*, 1597–1608. [CrossRef] [PubMed]
8. Sun, M.; Liu, L.; Wang, J.; Zhuansun, M.; Xu, T.; Qian, Y.; Dela Rosa, R. Facilitators and Inhibitors in Hospital-to-Home Transitional Care for Elderly Patients with Chronic Diseases: A Meta-synthesis of Qualitative Studies. *Front. Public Health* **2023**, *11*, 1047723. [CrossRef] [PubMed]
9. Sezgin, D.; O'Caoimh, R.; O'Donovan, M.R.; Salem, M.A.; Kennelly, S.; Samaniego, L.L.; Carda, C.A.; Rodriguez-Acuña, R.; Inzitari, M.; Hammar, T.; et al. Defining the Characteristics of Intermediate Care Models Including Transitional Care: An International Delphi Study. *Aging Clin. Exp. Res.* **2020**, *32*, 2399–2410. [CrossRef] [PubMed]
10. Sezgin, D.; O'Caoimh, R.; Liew, A.; O'Donovan, M.R.; Illario, M.; Salem, M.A.; Kennelly, S.; Carriazo, A.M.; Lopez-Samaniego, L.; Carda, C.A.; et al. The Effectiveness of Intermediate Care Including Transitional Care Interventions on Function, Healthcare Utilisation and Costs: A Scoping Review. *Eur. Geriatr. Med.* **2020**, *11*, 961–974. [CrossRef] [PubMed]
11. Steeman, E.; Moons, P.; Milisen, K.; De Bal, N.; De Geest, S.; De Froidmont, C.; Tellier, V.; Gosset, C.; Abraham, I. Implementation of Discharge Management for Geriatric Patients at Risk of Readmission or Institutionalization. *Int. J. Qual. Health Care* **2006**, *18*, 352–358. [CrossRef] [PubMed]
12. Burke, R.E.; Guo, R.; Prochazka, A.V.; Misky, G.J. Identifying Keys to Success in Reducing Readmissions Using the Ideal Transitions in Care Framework. *BMC Health Serv. Res.* **2014**, *14*, 423. [CrossRef] [PubMed]
13. Coffey, A.; Leahy-Warren, P.; Savage, E.; Hegarty, J.; Cornally, N.; Day, M.R.; Sahm, L.; O'Connor, K.; O'Doherty, J.; Liew, A.; et al. Interventions to Promote Early Discharge and Avoid Inappropriate Hospital (Re)Admission: A Systematic Review. *Int. J. Environ. Res. Public Health* **2019**, *16*, 2457. [CrossRef] [PubMed]
14. Statistics Bureau of Japan. Current Population Estimates as of October 1, 2022. Available online: https://www.stat.go.jp/english/data/jinsui/2022np/index.html (accessed on 23 February 2024).
15. Honda, M.; Inoue, N.; Liverani, M.; Nagai, M. Lessons Learned from the History of Postgraduate Medical Training in Japan: From Disease-Centred Care to Patient-Centred Care in an Aging Society. *Hum. Resour. Health* **2022**, *20*, 54. [CrossRef] [PubMed]
16. Goto, Y.; Miura, H.; Yamaguchi, Y.; Onishi, J. Evaluation of an Advance Care Planning Training Program for Practice Professionals in Japan Incorporating Shared Decision Making Skills Training: A Prospective Study of a Curricular Intervention. *BMC Palliat. Care* **2022**, *21*, 135. [CrossRef] [PubMed]
17. Kaifukuki Rehabilitation Ward Association. Available online: http://www.rehabili.jp/eng/eng_page.html (accessed on 23 February 2024).
18. Japanese Association of Hospitals for Community-Based Care. Available online: https://chiiki-hp.jp/gaiyou/18/ (accessed on 23 February 2024).
19. Tomura, H.; Nagata, S.; Murashima, S.; Suzuki, S. Development of a Scale to Evaluate Professional Discharge Planning Ability Among Nurses. *J. Jpn. Acad. Nurs. Sci.* **2013**, *33*, 3–13. [CrossRef] [PubMed]
20. Chiba, Y. Development and Validation of the Discharge Planning-Process Evaluation Measurement. *J. Jpn. Acad. Nurs. Sci.* **2005**, *25*, 39–51. [CrossRef] [PubMed]
21. Yamagishi, A.; Kube, Y.; Yamada, M.; Takahashi, N.; Kamada, R.; Fukui, S.; Ishiwata, R.; Morita, T. Zaitaku no Shiten no Aru Byoutou Kango no Jissen ni Taisuru Jikohyouka Shakudo no Kaihatsu Oyobi Shinrai Sei Datou Sei no Kenshou [Development and Test of Reliability and Validity of a Ward Nurse's Self-Assessment Scale of Practice with Perspectives of Home (Care)]. *Jpn. J. Nurs. Admin.* **2015**, *25*, 248–254. [CrossRef]
22. Takigami, K.; Tadaka, E.; Dai, Y. Development Of the Needs Assessment Scale of Discharge Planning for People with Dementia. *J. Jpn. Acad. Community Health Nurs.* **2012**, *15*, 18–26. [CrossRef] [PubMed]

23. Fukano, M.; Namba, S. Device of the Teamwork Standard in the Discharge Support. *J. Jpn. Soc. Health Care Manag.* **2016**, *17*, 60–65. [CrossRef]

24. Yamamoto, S.; Momose, Y. Creation of a Comprehensive Evaluation Index for Discharge Support in Ward Nurses. *J. Jpn Soc. Nurs. Res.* **2017**, *40*, 5_837–P5_848. [CrossRef]

25. Matsui, M. Quality Indicators of Geriatric Nursing in Hospital Settings. *J. Jpn. Acad. Gerontol. Nurs.* **2018**, *22*, 53–59. [CrossRef] [PubMed]

26. Kagawa, S.; Nagoshi, T. Development of an Evaluation Scale for Healthcare and Medical Professionals to Comprehensively Support Long-Term Hospitalized Psychiatric Patients Toward Discharge. *J. Jpn Soc. Nurs. Res* **2018**, *41*, 4_771–4_782. [CrossRef]

27. Ono, M. Development of a Nurse Competency Scale for Hospital to Home Transition Within an Integrated Community Care System. *J. Jpn. Acad. Nurs. Admin. Pol.* **2020**, *24*, 32–42. [CrossRef]

28. Morisaki-Nakamura, M.; Suzuki, S.; Kobayashi, A.; Kita, S.; Sato, I.; Iwasaki, M.; Hirata, Y.; Sato, A.; Oka, A.; Kamibeppu, K. Development and Validation of a Japanese Version of the TRANSITION-Q. *Pediatr. Int.* **2021**, *63*, 270–278. [CrossRef]

29. Shima, S. Verification of Validation and Reliability of the Transitional Care of Outpatient Departure Nurse. *J. Jpn. Acad. Nurs. Sci.* **2021**, *41*, 241–249. [CrossRef]

30. Kondo, H.; Tsujimura, H.; Ushikubo, M.; Yoshida, T.; Sakou, K.; Tokiwa, Y.; Kanda, K. A Study on the Reliability and Validity of a Scale of Hospital Nurses' Nursing Activities Toward Providing Home Care, and Related Factors. *Kitakanto Med. J.* **2021**, *71*, 131–141. [CrossRef]

31. Mika, K. Verification of Validation and Reliability of a Scale That Measure the Prospect of Transition Associated with the Introduction of Dialysis in Elderly Patients. *J. Jpn. Acad. Nurs. Sci.* **2022**, *42*, 412–421. [CrossRef]

32. Barry, M.J.; Edgman-Levitan, S. Shared Decision Making--Pinnacle of Patient-Centered Care. *N. Engl. J. Med.* **2012**, *366*, 780–781. [CrossRef] [PubMed]

33. Nagaoka, M.; Nakamura, Y.; Sato, A.; Otsuka, E.; Komatsu, J.; Shirakawa, H. Discharge Support Initiatives and Self-Evaluation by Ward Nurses in District A. *Health Sci. Bull. Akita Univ.* **2018**, *26*, 61–68.

34. Ogiso, K. Factors Related to Nurses' Discharge Planning Abilities at Hospitals for Community-Based Care. Nursing Staff in Hospital for Community-Based Care. *J. Jpn. Soc. Healthc. Admin.* **2022**, *59*, 68–77. [CrossRef]

35. Goto, Y.; Yamaguchi, Y.; Onishi, J.; Arai, H.; Härter, M.; Scholl, I.; Kriston, L.; Miura, H. Adapting the Patient and Physician Versions of the 9-Item Shared Decision Making Questionnaire for Other Healthcare Providers in Japan. *BMC Med. Inform. Decis. Mak.* **2021**, *21*, 314. [CrossRef] [PubMed]

36. Goto, Y.; Miura, H. Validation and Clinical Application of the Japanese Version of the Patient-Reported Experience Measures for Intermediate Care Services: A Cross-Sectional Study. *Healthcare* **2024**, *12*, 743. [CrossRef] [PubMed]

37. Teale, E.A.; Young, J.B.; Patient, A. A Patient Reported Experience Measure (PREM) for Use by Older People in Community Services. *Age Ageing* **2015**, *44*, 667–672. [CrossRef] [PubMed]

38. Picker The Picker Principles of Person Centred Care. Available online: https://picker.org/who-we-are/the-picker-principles-of-person-centred-care/ (accessed on 24 February 2024).

39. Cinocca, S.; Rucci, P.; Randazzo, C.; Teale, E.; Pianori, D.; Ciotti, E.; Fantini, M.P. Validation of the Italian Version of the Patient Reported Experience Measures for Intermediate Care Services. *Patient Prefer. Adherence* **2017**, *11*, 1671–1676. [CrossRef] [PubMed]

40. Mokkink, L.B.; Prinsen, C.A.; Bouter, L.M.; de Vet, H.C.; Terwee, C.B. The COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) and how to select an outcome measurement instrument. *Braz. J. Phys. Ther.* **2016**, *20*, 105–113. [CrossRef] [PubMed]

41. Health and Global Policy Institute. Survey report: Opinion Survey on Satisfaction of Healthcare and Participation of the General Population in Healthcare Policies. Available online: https://hgpi.org/research/hc-survey-2022.html (accessed on 2 March 2024).

42. Understanding Intermediate Care, Including Reablement A Quick Guide for People Using Intermediate Care Services. *National Institute for Health and Care Excellence.* 2018. Available online: https://www.nice.org.uk/Media/Default/About/NICE-Communities/Social-care/quick-guides/understanding-intermediate-care-quick-guide.pdf (accessed on 22 April 2024).

43. Prick, J.C.M.; Zonjee, V.J.; van Schaik, S.M.; Dahmen, R.; Garvelink, M.M.; Brouwers, P.J.A.M.; Saxena, R.; Keus, S.H.J.; Deijle, I.A.; Santeon VBHC Stroke Group; et al. Experiences with Information Provision and Preferences for Decision Making of Patients with Acute Stroke. *Patient Educ. Couns.* **2022**, *105*, 1123–1129. [CrossRef] [PubMed]

44. Keuning-Plantinga, A.; Stoffels, J.; Roodbol, P.F.; Finnema, E.J.; Van Munster, B.C. Involvement, Topics, and Roles of Nurses in Shared Decision-Making with Patients with Dementia in Acute Hospitals: An Integrative Review. *Nurs. Open* **2023**, *10*, 3519–3532. [CrossRef] [PubMed]

45. Nakahara, S.; Inada, H.; Ichikawa, M.; Tomio, J. Japan's Slow Response to Improve Access to Inpatient Care for COVID-19 Patients. *Front. Public Health* **2021**, *9*, 791182. [CrossRef]

46. Health and Global Policy Institute. Japanese. Health Policy, 3.1 Japan's Health Insurance System. Available online: https://japanhpn.org/en/section-3-1/ (accessed on 2 March 2024).

47. Health and Global Policy Institute. Financing, 7.2 the Medical Service Fee System. Available online: https://japanhpn.org/en/section-7-2/ (accessed on 2 March 2024).

48. Kenichiro, T.; Tomohiro, K.; Yasuhiro, N.; Obayashi, K.; Akahane, M. Community Health Care Vision: Toward Realizing the Desired Medical Service System. *J. Natl. Inst. Public Health* **2023**, *72*, 43–51.

49. Caroline, F.; Tom, P.; Hannah, K.; Charles, T. The Challenges and Potential of Intermediate Care. *The Healthcare Foundation*. 2024. Available online: https://www.health.org.uk/publications/long-reads/the-challenges-and-potential-of-intermediate-care (accessed on 22 April 2024).

50. Ministry of Health, Labour and Welfare. Japan 2035 Leading the World through Health. Available online: https://www.mhlw.go.jp/seisakunitsuite/bunya/hokabunya/shakaihoshou/hokeniryou2035/future/en/ (accessed on 22 April 2024).