

# The process of transprofessional collaboration: how caregivers integrated the perspectives of rehabilitation through working with a physical therapist

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## ABSTRACT

**Objectives** To clarify the process of how caregivers in a nursing home integrate the perspectives of rehabilitation into their responsibilities through working with a physical therapist.

**Design** This study was conducted under an action research approach.

**Setting** The target facility was a nursing home located in Japan. The researcher, a physical therapist, worked at the nursing home once a week from April 2016 to March 2017. During the study period, he created field notes focused on the dialogue and action of caregivers regarding care, responses of caregivers to the physical therapist and reflections as a physical therapist. Caregivers were also given a short informal interview about their relationship with the nursing home residents. For data analysis, two researchers discussed the content based on the field notes, consolidating the findings.

**Participants** The participants were caregivers who worked at the target facility. Thirty-eight caregivers agreed to participate. Average age was 39.6±11.1 years, 14 (37%) were male and average caregiver experience was 9.8 years.

**Results** Two cycles of action research were conducted during the study period. There were four stages in the process of how caregivers in the nursing home integrated the perspectives of rehabilitation through their work with the physical therapist. First, caregivers resisted having the rehabilitation programme carried out in the unit because they perceived that rehabilitation performed by a physical therapist was a special process and not under their responsibility. However, the caregivers were given a shared perspective on rehabilitation by the physical therapist, which helped them to understand the meaning of care to adapt the residents' abilities to their daily life. They practised resident-centred care on a trial basis, although with a sense of conflict between their new and previous role, which emphasised the safety of residents' lives and personhood. The caregivers increased their self-efficacy as their knowledge and skills were supplemented by the physical therapist and his approval of their attempted care. They were then able to commit to their newly conceived specialty of care as a means of supporting the lives of residents.

## Key points

- ▶ **Question:** Japanese nursing homes are hampered by limited numbers of caregivers and physical therapists. To cultivate caregivers who appreciate the perspectives of rehabilitation in supporting the lives of residents, this study aimed to clarify the process by which caregivers in a nursing home integrated the perspectives of rehabilitation into their care through working with a physical therapist.
- ▶ **Finding:** the study was conducted as action research. The results illustrate that the process of transprofessional collaboration (TPC) included four stages: resistance to incorporation, recapture of other perspectives, conflict in the role of caregiver and trials in new roles, and transformation to a resident-centred perspective.
- ▶ **Meaning:** these findings may be useful in helping health professions practice TPC, an ability that will be required in many developed countries experiencing a growing lack of human resources in medical and nursing care.

**Conclusions** The process of working with a physical therapist led to a change in caregivers' perception and behaviours, which occurred in four stages: resistance to incorporation, recapture of other perspectives, conflicts and trials in the role of caregiver and transformation to a resident-centred perspective.

## INTRODUCTION

The need for interprofessional collaboration (IPC)<sup>1</sup> in healthcare is increasing in line with the increasing number of elderly people who are susceptible to the adverse effects of disease on activities of daily living (ADLs).<sup>2,3</sup> Interestingly, however, even as the roles of the various healthcare professions have become clearer due to specialisation, the boundaries between professions have begun to collapse. Particularly, in developed countries, where the number of elderly is increasing,<sup>4</sup> demand



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for medical and nursing care exceeds supply. As a result, IPC that does not induce individuals to grow beyond the role of their own profession will fail to provide sufficient services. Overcoming this requires transprofessional collaboration (TPC),<sup>15</sup> in which professional boundaries are blurred or disappear to allow the deliberate exchange of knowledge and skills aimed at meeting complex healthcare needs. Previous findings have confirmed that healthcare professionals should transcend traditional disciplinary boundaries in communities where human resources for medical care are scarce.<sup>6</sup> Thus, it is anticipated that many developed countries currently experiencing an ongoing relative lack of human resources for medical care will require TPC.

One type of institution with a clear need for TPC is nursing homes in Japan. The number of medical professionals such as doctors, nurses and physical therapists in these centres is limited, and ‘caring’ is primarily provided by a limited number of caregivers. Watson<sup>7</sup> defines caring as: ‘the moral ideal of nursing whereby the end is protection, enhancement, and preservation of human dignity’. In Japan, however, many caregivers do not receive systematic higher education in caring. It may also be that they tend to capture the meaning of caring as ‘work’, rather than the concept of caring, as many nursing homes have inadequate education systems for caregivers. Furthermore, caregivers may regard residents as objects of work, rather than perceive their personhood, meaning recognising them as persons.<sup>8</sup> Caregivers play the major role in the lives of residents and are originally required to adopt the rehabilitation perspective of ‘helping disabled individuals to perform their functions as much as possible and integrate them into society’.<sup>9</sup> However, caregivers tend to focus on their ‘work’, and in doing so tend to provide residents with excessive help in performing their ADL. Consequently, their help sometimes leads to a converse decrease in the residents’ ADL. The number of nursing homes serving as residences for elderly people needing care is increasing,<sup>10 11</sup> and the cultivation of caregivers who appreciate the perspective of rehabilitation by rehabilitation therapists in supporting the lives of residents is expected to increase. To cultivate these caregivers, they may learn the meaning of care on the job by receiving education and by being encouraged by and receiving feedback from other professionals with whom they collaborate.

Although TPC is generally required when practitioners step into specialised areas in which they have not previously worked, the process can result in much anxiety and conflict. Indeed, regarding IPC, studies have reported that conflict among professional roles has caused decreases in job satisfaction,<sup>12</sup> as well as friction, clashes and collision.<sup>13–15</sup> In addition, conflict management mode choices among physicians and nurses for dealing with their conflict have been reported.<sup>16</sup> The role ambiguity between health professions elicited by TPC is expected to evoke even greater resistance and conflict than IPC.

The resistance and conflict that arose during the process of TPC and transformation of caregivers through working together in this study reflected the theoretical framework of transformative learning developed by Mezirow.<sup>17</sup> Transformative learning is ‘the process of learning that forms beliefs and opinions that justify behavior by changing the conforming frame of cognition (meaning perspective) which has been taken for granted’. Mezirow noted that the process of transformation begins with the ‘confusion-causing dilemma’ and presented a communication called ‘rational discourse’ that is reflective and presupposes the intervention of reason as conducive to transformative learning. The present study uses this theoretical framework of transformative learning.

Although previous studies have investigated collaboration between caregivers and nurses to improve the quality of caring in a nursing home,<sup>18</sup> as well as between family caregivers and nurses in a home care setting,<sup>19</sup> collaboration between caregivers and physical therapists has not yet been reported. Furthermore, other reports have described transprofessional education (TPE) processes by healthcare professions and lay people,<sup>20</sup> along with the need for various professions to work as transprofessional teams in providing home healthcare.<sup>21</sup> However, TPC processes conducted among clinical professions have not been clarified.

In this research, a physical therapist engaged as a practitioner and researcher at a nursing home in Japan worked with caregivers to encourage them to integrate the perspectives of rehabilitation into the fixed role of caregivers. Here, we report the process of how the caregivers integrated the perspectives of rehabilitation through working with the physical therapist. The findings of this study will help in managing the implementation and practice of TPC and clarify the significance of viewing the phenomenon from the perspective of both practitioner and researcher.

## METHODS

### Study design

This study used the participatory action research approach,<sup>22</sup> which focuses on action and change. The primary characteristic of action research is the use of cycles aimed at meeting identified needs. The process steps are diagnosing and analysing problems, planning, implementing/taking action and evaluating. After the evaluation, a new cycle can start based on the new situation.<sup>22</sup> This research’s key issue was investigating the practicability of voluntary and stress-free care of nursing home residents by caregivers that aimed to help residents improve their ADL capacities via the integration of rehabilitation perspectives into routine nursing care. The present study aimed to clarify the process used to resolve this issue by using the action research method. The lead author participated in the study by working with caregivers as a physical therapist and researcher.

## Study setting

The setting was a special nursing home located in Ibaraki Prefecture, Japan. The facility accommodates a maximum of 70 residents. As of 2016, it housed 70 residents and employed 38 caregivers and 3 nurses full time, and two regular doctors (for 2 days a week). Compared with other types of nursing facilities, this facility's residents required significant assistance in ADL, such as eating, toileting and bathing. Residents of special nursing homes in Japan receive a wide range of such care services at relatively low cost, and many caregivers working there are non-certified.

The facility was selected for this study for two reasons. First, it had only been open for about 2 years and had built little organisational culture around itself. We therefore considered that it would be easier for the staff and organisation to change without being bound by organisational customs. Second, the facility had not previously employed rehabilitation professionals, which we expected would minimise prejudice and facilitate observation of the process of change following new collaboration with the physical therapist.

The participants were caregivers who worked at the target facility and understood the objectives of the study. The lead author (RG), who worked with them as a physical therapist, is a male with 8 years of experience has a PhD. RG commenced working at the facility 1 day a week. The coauthor (JH) is a general practitioner who received training in qualitative research as part of a PhD programme. JH had previously worked at this facility as a commissioned doctor once a week for a 2-year period in 2015–2016.

## Data collection and analysis

RG worked once a week at the target facility from April 2016 to March 2017. He created field notes focusing on dialogue and action by the caregivers in their provision of caring, responses of caregivers in relation to the physical therapist and his reflections as a physical therapist. Caregivers were also given a short informal interview about their relationship with the nursing home residents. A structured interview guide was not used as the interview content differed depending on the situation. Furthermore, to record natural conversation by a caregiver at work, the conversations were not recorded via audio recorders.

Observation records were checked with caregivers to ensure that the data interpretation was valid and accurate. The record texts were shared by RG with JH. RG and JH then repeated the discussion based on the text, evaluating and reflecting on the changes in caregivers as a result of working with the physical therapist. In addition, through the action research during the study period, they consolidated the findings to develop a model of 'the process by which caregivers in a nursing home integrated the perspectives of rehabilitation through working with a physical therapist'.

The researcher (RG), a physical therapist, tried to maintain a balance between 'involvement' as a practitioner and

'detachment' as a researcher. Nevertheless, it was difficult to exclude the possibility of a bias in the recording of field notes and analysis of data because the researcher as a physical therapist was motivated to facilitate changes in caregivers' perceptions and behaviours. In an attempt to minimise such bias, RG periodically shared the records with JH, a coresearcher who is familiar with the institution, to obtain feedback from the perspective of an outsider.

## RESULTS

Two cycles of action research were conducted during the study period.

### Cycle 1

#### Diagnosing the problem

#### *Caregiver characteristics and their work in this facility*

The facility examined in this study employed 38 caregivers who agreed to participate in the study. Average age was  $39.6 \pm 11.1$  years, and 14 (37%) were male. Caregiver experience ranged from 1 to 26 years, with an average of 9.8 years. They worked in a total of seven units.

The caregivers in this facility are constantly busy caring for the nursing home residents and have little time to rest. Their role involves serving breakfast and encouraging toileting after breakfast. Thereafter, the caregivers rostered for bathing help residents bathe and ensure that they drink water, before putting them to bed for a rest. These tasks are often not completed until close to lunch time. When residents require additional care, these tasks take longer to complete. Caregivers do not have institutional mobile phones, neither is a board-type nurse call system available, so locating residents who push the nurse call button for toileting assistance often takes time. Despite their busy schedules, the caregivers are responsible for keeping residents safe. They pay particular attention to ensuring that they perform their tasks safely so that, for example, residents do not fall or develop bedsores. However, if the work of a caregiver is delayed, the nurses point this out. Caregivers are therefore averse to having their work delayed and tend to act aggressively towards residents who do not follow their instructions or are demanding. Nurses also routinely proposed ideas for improvement of nursing practices to the caregivers; however, the caregivers occasionally interpreted these ideas as unsuitable for the lifestyle preferences of the residents or nursing procedures of the caregivers, or even considered them impracticable given their heavy workload. Such negative responses from the caregivers were not frequent but were highly noticeable, such that the nurses often complained by saying, 'the caregivers are uninterested in change, no matter how many times we suggest something to them'.

The residents' daily schedule includes exercise or a recreational programme. However, many residents sleep through the programme in a wheelchair while the dull sounds of the video exercise programme permeate the

unit as caregivers change the bed linens nearby. This is not the kind of caring that encourages independence. Of course, caregivers are not always busy with their tasks. In some units, caregivers clap their hands while singing songs with the residents.

### **Rehabilitation perceived by caregivers**

When the physical therapist visited the units, the caregivers cheerfully greeted the researcher. They would say to the residents, 'Mr. A, here comes the physical therapist'. Caregivers appreciated that the rehabilitation would be performed outside the unit. During rehabilitation, a resident said that 'they were happy to be able to participate in such a special programme'. Once a rehabilitation session was over, a caregiver announced 'that's the end of the rehabilitation session' to the resident and physical therapist when the resident returned to the unit. A caregiver said,

Would you put the cane away? ... (Omitted)... You can practice walking only during the rehabilitation session with the physical therapist. Don't ever think that you can practice walking in the unit. If you fall, it is we who will be blamed for the fall. (Caregivers)

From these words and actions, it was considered that caregivers recognised the rehabilitation performed by the physical therapist as a special activity and felt that the safety of the residents was not their responsibility while undergoing the rehabilitation session. Therefore, they did not like having the residents undergo the rehabilitation programme in the unit.

### **Plan**

The physical therapist regarded the rehabilitation session as something that would maintain and improve the abilities of residents who required rehabilitation in their daily lives and be a way to help them adapt the abilities that they did retain to their ADL environment. With this understanding in mind, the physical therapist felt the need to communicate his idea to the caregivers that rehabilitation was not a special service, but rather a part of the life of residents that should naturally be included in the caregivers' tasks. However, the physical therapist inferred that the caregivers did not understand what kind of care the physical therapist would be able to provide to residents. In addition, the physical therapist considered that a one-sided relationship, such as that existing between the nurses and caregivers, where nurses provide instruction to the caregivers, should not be established between the physical therapist and caregivers. This was because such a relationship would only intensify the frustration felt by caregivers against the physical therapist, failing to instil in caregivers the role of providing care with a rehabilitative perspective that the physical therapist had expected from caregivers. The researcher therefore planned the following two actions:

1. To help the caregivers develop a closer relationship with the physical therapist, the physical therapist

visited every unit on his weekly working day and communicated effectively with caregivers, for example, by asking about the ADL of individual residents.

2. The physical therapist provided rehabilitation in front of caregivers in the units of residents to demonstrate that rehabilitation is not something special or difficult to do, thereby attempting to gain the caregivers' respect for his professionalism.

### **Action**

The physical therapist conducted rounds at every unit each visit and communicated with caregivers. He thereby worked to build a relationship that would promote free discussion. The physical therapist then obtained permission from the caregivers to encourage the residents to walk and practice using the toilet in the units. He responded to caregiver concerns by telling the caregivers that the residents should adapt their experience with the physical therapist to their ADL, rather than have caregivers become part of the 'rehabilitation session'. The physical therapist said,

It is important to flex the joints of those who are bed-ridden at least once a day like this. I want them to live as human beings until their last days. (Physical therapist)

Mr. S can use the handrail and stand up and move without assistance as long as the bed and wheelchair are placed like this. (Physical therapist)

The physical therapist demonstrated to caregivers the ways that the residents could smoothly adapt their abilities to ADL in every possible situation and from various angles. Additionally, by explaining the significance of these abilities from the perspective of the residents' ADL, the physical therapist reinforced the meaning of the movements to the caregivers.

### **Evaluation/reflection**

Owing to the manner by which the physical therapist discussed caring from the point view of the residents' lives, the caregivers came to vaguely realise the meaning of caring to the daily activities of the residents. As an example, one caregiver said,

Oh, I didn't realize that such things (not providing too much help when a resident moves from one place to another) constituted rehabilitation. (Caregiver)

In addition, some caregivers were found trying to provide care during routine tasks while struggling to integrate the new rehabilitation perspective of adapting the resident's abilities to daily life. However, they were naturally inefficient in these efforts due to a lack of skills and knowledge, given that the physical therapist had only just shared the new perspective with them. Nevertheless, it was clear in the eyes of the therapist that the caregivers' routines were changing.

We were deeply impressed by the words of the physical therapist, that he wanted the residents to live as human beings until their last days. (Caregiver)

Ms. T is bed-ridden and all I could do for her was to change her diapers and bathe her. However, I realised that there are more things that I can do for her as a caregiver! (Caregiver)

The likely reason why the caregivers made such comments was that the physical therapist communicated his intentions and wishes to the caregivers, succeeding in creating an atmosphere wherein the caregivers could feel a sense of closeness and companionability with the physical therapist. Nevertheless, it was also true that not every caregiver nor unit implemented care that adapted the residents' abilities to their daily life. Indeed, as had been feared, a relationship between the physical therapist and caregivers could not be established in two units, and the routine tasks of these caregivers did not change. The leaders of these units did not accept the proposals from the physical therapist and showed a negative attitude towards him. The physical therapist also kept a distance from these units and could not communicate well with the caregivers.

### Cycle 2 Plan

The physical therapist considered it necessary for the caregivers to strengthen their rehabilitation knowledge and skills to better implement care that adapted the residents' abilities to their daily life. The physical therapist expected the caregivers to continue their trial practice of caring and considered it necessary to report his findings of changes in the residents following care to the caregivers and to increase their self-efficacy. To achieve these goals, the physical therapist planned the following actions for the purposes of: (1) complementing the rehabilitation knowledge and skills that the caregivers required and (2) reporting changes in residents following trial care by the caregivers, with the expectation that their trial care would continue.

### Action

The physical therapist supplemented the knowledge and skills of the caregivers in their caring to adapt the residents' abilities to their ADL. The physical therapist communicated knowledge verbally and demonstrated skills in front of caregivers.

Would you kindly join me and observe her beside the bed? ... (Omitted)... I know it is very scary to move her joints. It is OK if you move them only slightly like this. (Physical therapist)

Furthermore, the caregivers undertook continuing such care on a trial basis, while the physical therapist provided approval and feedback for their efforts. For example, the physical therapist provided the following feedback to a caregiver:

I think that Mr. E can gradually do things without help because the caregivers look after him without offering excessive help. (Physical therapist)

### Evaluation/reflection

These exchanges with the physical therapist helped caregivers to develop greater self-efficacy in their caring. Furthermore, substantial changes occurred in residents' ADL, such as in mobility without assistance and in spending time in a chair instead of being confined to bed. Feedback from the physical therapist about caring to help residents adapt their abilities to their ADL gradually led to this care becoming the responsibility of the caregivers. Additionally, the 'rehabilitation session' was no longer something special but part of the residents' ADL. Through this process, it was considered that the caregivers came to provide caring that helped residents adapt their abilities to their ADL. A caregiver said,

We realised that we could incorporate rehabilitation into their ordinary daily lives, too. So, we decided to give a little more time to Mr. T and wait for him to do things that he could do for himself. We have recently learnt that it is also important for caregivers to wait. (Caregiver)

As it is almost a habit to move the legs a little while changing their diapers, and we think that we can continue to do this without fail. (Caregiver)

It was initially understood that caregivers would be unable to provide care that integrated the rehabilitation perspective when they were busy with tight work schedules or not confident in their practice of care. However, this situation changed following the physical therapist's intervention; the caregivers practised rehabilitation-based caring when they had some time to spare or when they were able to consult with the physical therapist on topics that their knowledge and skills remained inadequate.

### Review of the outcome of the entire action research (two cycles)

The duration of each stage of the TPC process differed among individual caregivers and units due to differences in the behaviour modification of the caregivers. For example, some caregivers remained at the same stage for some time, returned to a previous stage, but then progressed to the next stage after a certain time. In addition, the positive attitude of some of the unit leaders had a good impact on the caregivers; caregivers of five units came to understand that the meaning of caring included helping the residents adapt their abilities to their ADL under the guidance of the unit leaders. The primary cause of these accomplishments was the leaders' passion in improving the ADL of the residents and their attitudes towards acquiring further knowledge and skills from the physical therapist. In contrast, throughout the observation period, the leaders of two units continued to argue for maintaining a focus on the safety of the residents. These leaders were confident in their abilities and continued to resist any input from unit outsiders (ie, the physical therapist). Nevertheless, some members of these two units sensed the changes in other units and consulted the physical therapist privately. However, they did not

speak out in front of their leader and continued to carry out the 'caring' that their leader instructed.

## DISCUSSION

This research study clarified the process through which caregivers worked with a physical therapist in a nursing home to implement care that integrated the role of rehabilitation to adapt residents' abilities to their daily lives. At the initial stage of the research, the caregivers perceived rehabilitation to be a collection of specific professional activities and showed resistance towards the physical therapist, trying to prevent the addition of rehabilitation to their routine tasks. The caregivers then came to vaguely understand the meaning of care via the building up a relationship of trust with the physical therapist and by assisting residents to improve the adaptation of their abilities to their ADL from the standpoint of a rehabilitation perspective (cycle 1). When the caregivers began to provide care that adapted the residents' abilities to their ADL under the physical therapist's guidance, the physical therapist approved the actions of the caregivers and complemented their knowledge and skills on caring. Consequently, caregivers became capable of practising care that integrated a rehabilitation perspective (cycle 2).

This study revealed that caregivers go through the stages of resistance, recapture, conflicts and trials, and transformation in the process of integrating the perspectives of rehabilitation into caring through working with a physical therapist. First, the caregivers resisted the rehabilitation provided by a physical therapist as an intrusion into their area. This reaction was similar to that described in previous reports, in which individual professionals approached the delivery of patient care from within their professional silo with a clear sense of protecting the boundaries of their profession.<sup>23 24</sup> However, through continued working and dialogue with the physical therapist, the caregivers became vaguely aware of the meaning of care in the lives of residents. They also raised expectations in their practice of caring by integrating the perspectives of rehabilitation. However, they struggled in situations where they could not carry out this newly envisioned care due to the immaturity of their knowledge and skills. Mezirow<sup>25</sup> stated that decisions and judgements are made within a unique and implicit framework (meaning perspective), which has been cultivated socially and culturally. He explained that transformative learning generates and reconstructs meaning from experience by reflection. He also cited a 'confusion-causing dilemma' as one of the phases that often appears in the process of transformative learning.<sup>17</sup> In this study, the conflicts and trials between caregiver-centred care, which placed importance on safe work execution, and resident-centred care, which did not lead to caring as envisioned by the caregivers' within their immature knowledge and skills, were considered to be a 'confusion-causing dilemma'.

Initially, the physical therapist shared his view that the caregivers needed to view their work from the standpoint

of the residents' lives with the caregivers. In other words, the physical therapist advised caregivers to first focus on the quality of residents' ADL and to position caring tasks as a part of their efforts to adapt the residents' abilities to their ADL. Subsequently, the physical therapist approved the caregivers' attempts to help the residents use their abilities to adapt to their ADL. Furthermore, feedback from the physical therapist to the caregivers about changes in the residents' ADL abilities appeared to affect the caregivers' behavioural modification. That is, their behavioural modification arose by rational discourse<sup>17</sup> with the physical therapist about the uncertain meanings that the caregivers had begun to recognise and by the physical therapist's approval of their attempts. Of note, interprofessional competency in Japan<sup>26</sup> was developed based on the behavioural characteristics of professionals who achieved high performance in IPC. It consists of six domains, namely two core domains of 'Patient-/Client-/Family-/Community-Centred' and 'Interprofessional Communication' and four peripheral domains of 'Role Contribution', 'Facilitation of Relationships', 'Reflection' and 'Understanding for Others' (table 1). In the present study, 'Interprofessional Communication' between the caregivers and the physical therapist through 'Client-centred' perspectives, such as viewing their work from the standpoint of the resident's life, may have contributed to the achievement of TPC.

The four stages in the modification of caregiver behaviour were never linear. People generally resist stepping into unknown specialties or undertaking works that they previously recognised as non-specialised.<sup>23</sup> Practical application and adoption of TPC may therefore take a long time. In the near future, medical and nursing resources will be depleted, even as such care needs increase. The practice of TPC therefore requires the establishment of meaningful perspectives beyond role recognition by repeated dialogue with colleagues and other professionals, and reflection on one's own role while sharing a patient centred/client centred/family centred/community centred viewpoint through interprofessional communication.

In this study, the physical therapist worked with caregivers as both researcher and therapist, so it can be said that he was a participant as an observer.<sup>27</sup> The words and actions of the author as both researcher and physical therapist affected the caregivers, and the caregivers then changed. The observation of changes in the caring of the caregivers led the physical therapist to view the caregivers as collaborators in assisting the ADL of the residents. In other words, a reflexive relationship<sup>28</sup> arose between the caregivers and the author. It is therefore possible that the researcher's expectation of observing changes in the caregivers may have influenced his involvement with the caregivers as the physical therapist. Against this, however, the author was always aware of this possibility of reflexivity and tried to maintain a sense of distance from the caregivers in their respective positions. Thus, it is important to view those phenomena seen in collaboration with

**Table 1** Interprofessional competency in Japan: competency domains and statements

Competency domains	Statements
<b>Core domains</b>	
Patient centred/client centred/family centred/community centred	Collaborative professionals can focus on important issues in which patients, clients, families and communities are interested and share goals in order to improve healthcare services for patients, clients, families and communities.
Interprofessional communication	Professionals respect different professionals and share roles, knowledge, ideas and values with each other for patients, clients, families and communities.
<b>Peripheral domains</b>	
Role contribution	Professionals can understand mutual roles and use knowledge and skills with each other to conduct their roles properly.
Facilitation of relationship	Professionals can build, maintain and grow relationships with different professionals. Professionals can also properly cope with conflicts among different professionals.
Reflection	Professionals can review concepts, performance, emotion and values of their own professions and powerfully understand their collaborative experiences with different professionals to improve collaboration.
Understanding of others	Professionals can understand concepts, performance, emotion and values of other professions to improve collaboration.

Source: adapted from Haruta *et al.*<sup>26</sup>

other professions from the perspective of the practitioner and from the perspective of the researcher in observing and managing TPC.

This study was an action research conducted in a specific setting, namely a nursing care facility in Japan, and the results might not therefore be applicable to nursing care facilities in other countries with different healthcare and nursing care systems and cultures. Nevertheless, it is expected that the results of this study will contribute to a better understanding of the process of TPC in healthcare and nursing care professionals, including how professionals feel when they step into specialised areas in which they not previously worked and how they interact with other professionals to achieve TPC. In the future, we plan to continue our validation of the process of TPC in various settings in order to provide more robust data for clinical application.

## CONCLUSION

The process of collaboration between caregivers and a physical therapist leading to a change in the caregivers' perceptions and behaviours was clarified. This change occurred in four stages: resistance to incorporation, recapture of other perspectives, conflict in the role of caregivers and trials in new roles, and transformation to a resident-centred perspective. These findings may be useful for other professions aiming to implement TPC, as will likely be required in many countries now experiencing an ongoing lack of human resources for medical and nursing care. In particular, this model may have the potential to be developed for low-income and middle-income countries whose lack of human resources is even worse than many high-income countries.

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