An Overview of Social Participation in Older Adults: Concepts and Assessments

Hiroyuki HASHIDATE, RPT, PhD1, Hiroyuki SHIMADA, RPT, PhD2, Yuhki FUJISAWA, RPT, PhD1 and Mitsunobu YATSUNAMI, RPT, PhD1

1) Department of Physical Therapy, School of Health Sciences, Kyorin University, Japan
2) Department of Preventive Gerontology, Center for Gerontology and Social Science, National Center for Geriatrics and Gerontology, Japan

ABSTRACT. In older adults, social participation is an important component of rehabilitation and health promotion. Several studies have attempted to describe the definition and concepts of social participation, and there were many outcomes to measure social participation. This overview provides information about representative social participation and related concepts that have been defined in the literature. A standardized definition of social participation has not been developed; commonly, recognition for social participation was proposed as focused on involvement in social activities that provide interaction with others in a society or community. Many instruments assess the various aspects of social participation. Because of operational definition and diversity in social participation, performance in social participation was adopted as an aspect of assessment. Further discussions are needed to clarify the definition of social participation and evaluate the instruments used to assess social participation for it to be useful for rehabilitation and health promotion. In doing so, determining and developing assessment and intervention based on the purpose or perspective of social participation in older adults with and without disabilities is important.

Key words: Social participation, Definition, Concept, Assessment

Social participation is a modifiable health determinant for successful aging in older adults. International interest in social participation is increasing yearly1,2. However, despite the interest in social participation, no standardized definition of the term exists. The International Classification of Functioning, Disability and Health (ICF) proposed by the World Health Organization (WHO) provides an internationally accepted taxonomy of functioning and disability with standard terminology and a conceptual framework of health domains for the description of health-related states3. The ICF defines participation as “involvement in a life situation,” participation restriction as “problems an individual may experience in involvement in life situations,” and activity as “the execution of a task or action by an individual.” Activity and participation are divided into a single list of nine domains4. The ICF has a major impact on the use and understanding of participation in healthcare; however, some overlaps exist in the components of activity and participation. Although four alternatives have been prepared for structuring the relationship between activities and participation in terms of the ICF domain list, the WHO has also stated the difficulty in distinguishing between “activities” and “participation” based on the domains in the component5. The boundary between the two dimensions in the ICF is unclear6. Additionally, similar social participation concepts, expressed as synonyms and terms related to participation, social engagement, social involvement, community engagement, community involvement, and community participation, have been operationally defined and interchangeably used as social participation6,7. Even the distinction between “participation” and “social participation” has not been fully clarified8. The definition proposed by Levasseur et al.7 is a reasonable, well-organized explanation of social participation and is a well-known definition. Levas-
Bukov et al.[^7] performed a content analysis of 43 articles with original definitions of social participation in older adults. The authors defined social participation as “a person’s involvement in social activities that provide social interactions within his/her community or society.” Their content analysis showed that social participation definitions mostly focus on the involvement of a person in activities providing interactions with others in the society or community. Six proximal to distal levels of involvement of an individual with others were identified: 1) doing an activity in preparation for connecting with others, 2) being with others, 3) interacting with others without doing a specific activity, 4) doing an activity with others, 5) helping others, and 6) contributing to society (Table 1). These hierarchical levels were summarized as social participation (levels 3-6), participation (levels 1-3), and social engagement (levels 5 and 6).

Each level of social participation has several domains according to the content or context classified by the ICF. Older adults can carry out various types of social participation. Bukov et al.[^7] distinguished three types of participation with respect to content, context, and resources required to participate: collective participation as “the common act of group members, whereby the intention is directed toward the group itself and not toward reaching an outside goal”; productive participation as “the rendering of services, goods, and benefits for others”; and political participation as “acts of decision-making about social groups and the allocation of resources.” They reported that collective participation accounts for a large proportion of the three types of social participation among older adults aged 70 and over. Serrat et al.[^8] pointed out diversity of social participation in older adults and classified social participation into four types based on two forms (individual or collective) and two participations (social or political). These social participation activities often do not necessarily originate obligatorily or unconsciously by duty. They are optionally or consciously performed according to the wishes, preference, inclination, etc. of a person in older adults. Actual social participation in older adults differs depending on their age and type of social participation[^9]. Not all older adults participate or need to participate in all possible types of social participation[^9]. In an individual’s rehabilitation and health promotion, the following points seem to be important when considering meaningful participation for the person from among a number of social participations: 1) which social participation is weighted to the person, 2) what each social participation means to the person, and 3) how the meaning of interaction is included in the performance of social activities of the person. Social activities and interactions are essential elements of social participation[^10]. The meaning of the interaction may be any or all the “antecedents for social participation,” “a phenomenon in social participation,” and “consequences caused by social participation.” The performance of one social activity can be quantitatively measured; however, quantitatively showing how much the interaction, which is the essence of social participation, is included in the performance is not easy. Aspects such as the “importance” or “satisfaction” of social participation for a person may help understand how much interaction is reflected in the person in a certain social participation.

In addition, social participation through these social activities, depending on the type, is often performed in an outdoor or indoor environment. The definition of social participation includes a definition focusing on social participation in the outdoor environment. Dehi Aroogh M et al.[^11] conducted a concept analysis of social participation in older people based on 57 articles published between 2000 and 2018. They defined social participation in older adults as “the conscious and active engagement in outdoor social activities leading to interacting and sharing resources with other people in the community, and the person has a personal satisfaction resulting from that engagement.” Social participation is carried out not only outdoors but also indoors, and outdoor social participation has a wider environment and enriched activities; however, older adults may place importance on social participation that can be carried out indoors. Some healthy community-dwelling older adults need to participate in the family society by performing domestic roles and assisting families with disabilities. They also interact with many others through social networks by computer and mobile phone. On the other hand, older adults with disabilities tend to have a living space limited to the indoors. It is not only important to enhance activities outdoors but also indoors[^12]. It may not always be necessary to limit the location of social participation to outdoors depending on the content and characteristics of the social participation. Determining if the participation is a priority for the person’s future daily life or the kind of impact that the social participation will have on the person seems more important. For example, it is expected that body function will be maintained and improved if the person engages in mandatory high-intensity social activities. In contrast, the preference of the person for low-intensity and sedentary social activities cannot be expected to maintain and improve body function. The contents and characteristics of social activities that accompany social participation may have health implications.

### Factors Related with Social Participation

Since social participation is a generic and broad concept, it is related to various factors. In the ICF, social participation is a component of living functions related to mental and physical functions, physical structure, activity, health conditions, individual factors, and environmental factors[^13]. Previous reviews have reported that social participation is associated with cognitive and mental functions,
### Table 1. Proposed taxonomy of social activities based on levels of involvement of the individual with others, and goals of these activities in older adults (Levasseur M, et al. 2010)\(^7\)

| Levels   | Description of the levels of involvement | Individual proximity of involvement with others | Goals of the activity | Activities for whom or with whom | Examples using parental roles in relation to involvement in society |
|----------|------------------------------------------|-----------------------------------------------|-----------------------|----------------------------------|---------------------------------------------------------------|
| First level | Doing an activity in preparation for connecting with others | alone | basic needs oriented | for oneself | • The first level involves all daily activities that an individual normally does alone in preparation for other activities that will connect him/her with others.  
• These activities are basic and survival activities such as eating and dressing or can be more complex activities such as preparing meals (includes both activities of daily living and instrumental activities of daily living).  
• The person usually does the first level activities alone and in his/her home.  
• Example: solitary activities such as listening to the radio and watching TV, which informs himself/herself about what is going on in society. |
| Second level | Being with others (alone but with people around) | in parallel | basic needs oriented | for oneself | • The second level also includes activities where the individual is not directly in contact with others but others are around.  
• Example: the activities taken place in the community such as buy tickets online (Internet) and go alone to the cinema, execute financial transactions or shop for groceries without the services of a cashier, etc. |
| Third level | Interacting with others (social contact) without doing a specific activity with them | in interaction | socially oriented | (with others) | • In the third level, the individual is in social contact with others, in person or through the Internet, but does not do a specific activity with them.  
• Example: when shopping, the individual interacts with others to find what he/she wants or to pay for merchandise. |
| Fourth level | Doing an activity with others (collaborating to reach the same goal) | in interaction | task oriented | with others | • In the fourth level, the individual collaborates with others to perform an activity, reach a common goal.  
• Example: most recreational activities like tennis or shuffleboard.  
• Level three and four social activities include but are not restricted to social roles at a specific time or someone’s personal situation (e.g. being a parent). |
| Fifth level | Helping others | in interaction | oriented toward helping others | with others | • The fifth level includes activities where the individual helps others.  
• Example: being a caregiver or volunteer.  
• A person or group of persons being helped can be identified. |
| Sixth level | Contributing to society | in interaction | society oriented | for others | • In the sixth level, the individual contributes more broadly to society (civic activities).  
• Example: being involved in political parties and organizations.  
• Contrary to the previous level, these contributions are seldom made solely by one individual and can potentially be beneficial to many persons, i.e. not intend to help specifically one person or a group of persons at the time, and interaction occurs with the community or society. |
functional status, health-related adverse event in health condition, and health-related quality of life. Although the factors related to social participation defined by each researcher have been investigated in each country, an international consensus on the definition of social participation has not been reached. Additionally, the concepts of social participation and its restriction may differ across cultures and neighborhood environments. The factors related to social participation may also need to be investigated in detail according to the country or across countries. In the last 20 years, reports on social participation in older people have annually increased. Most reports in terms of social participation in older people have been published in the United States, followed by Japan. In Japan, the relationship between social participation and each factor in older adults has been investigated. In addition, in previous studies, social participation was associated with better cognitive function; less depressive symptoms; more instrumental activities of daily living; less functional disability; better physical activity; better life-space mobility; better mental health; self-related health; and mortality in Japanese older adults (Fig. 1). The factors associated with social participation in Japanese older adults are consistently similar to those reported in previous reviews.

When focusing on social activity, which is a component of social participation, activities involving older people positively or negatively correlate with demographic, biological, psychological, and cognitive factors; behavioral attitudes and skills; social and cultural factors; and environmental factors. The participation of older adults in physical activity is a consequence that maintains and improves physical, cognitive, and psychological aspects and benefits health-related outcomes. However, a disagreement exists as to whether exercise-based physical activity enhances social participation. In other words, social participation with physical activity brings about a health benefit (physical function, structure, and activity in the ICF component) specific to the activity content; however, physical activity or enhanced physical function does not always enhance social participation. Complex interventions specific to the characteristics of various social participations (e.g., health status of the participating person, tasks to be carried out in the participation, and environment in which the participation is carried out) are required to obtain the benefits of enhancing social participation.
Assessment for Social Participation

Since there is no single instrument that can assess all aspects of health, no single instrument may be able to represent all aspects of social participation. There is no agreement regarding a standardized assessment and definition of social participation. There are different social participation characteristics depending on age, and social participation assessments linked to ICF\(^{57-60}\) or the ICF-extended version for children and youth\(^{61}\) have been proposed. Most instruments have been developed for adults including older adults with or without various diseases\(^ {57-60}\), and assess social participation only to a limited extent\(^ {62}\). Family assessments of participation focus on the degree to which a person takes part in household, community, and society activities; fulfills roles; has relationships; and displays community presence. Social participation can be assessed as the performance expressed in various aspects\(^ {3,6,57}\), such as difficulty (restriction, limitation, and problem), independence, frequency, and hour\(^ {5}\). The most common aspects of assessment for social participation include existence (participated or not); the degree of limitation, restriction, or difficulty; the degree of independence or need for assistance; and a count of the frequency or hours with which actions are performed in each type of social participation. Previous studies have identified social participation assessments that have acceptable levels of evidence of face, content, construct validity, and reliability to support their application to measure social participation\(^ {12,17,57-60}\) (Table 2). The instruments score the performance in social participation linking the ICF chapter domains of activity/participation\(^ {57,57-60}\), such as the presence/absence and degree of difficulty, frequency, importance, satisfaction, etc., and indicate the degree of social participation depending on whether the score is high or low.

Whether an individual participates or not may be determined by the following: 1) the feasibility to perform the participation, which is explained by the health condition of the individual and the environment surrounding the individual; 2) demand or duty for the individual to perform the participation based on a requirement from society or community; and 3) the importance and satisfaction to perform the participation determined by individual comprehension, appreciation, morality, obligation, and preference. Therefore, depending on the purpose of assessment for social participation, not only objectively assessing the performance of participation but also investigating subjective aspects, such as personal importance and satisfaction of social participation, are desirable (Fig. 2). Both objective and subjective measures of participation have been recommended as separate measures or even as separate subscales in a single instrument\(^ {60}\).

The ICF Measure of Activity and Participation Screener (IMPACT-S)\(^ {60}\)

The IMPACT-S is a self-report instrument for use in epidemiologic research assessing activity limitations and participation restrictions. It is composed of 32 items in 9 domains, each representing 1 of the 9 ICF activities and participation chapters. In this instrument, the ICF chapters 1-5 are designated as activities, and chapters 6-9 are designated as participation. The 32 items are scored by a three-point scale (0, cannot do that at all; 1, major limitations; 2, minor limitations; 3, no limitations whatsoever). Nine scale scores (1 per ICF domain), two subtotal scores for activities and participation, and a total score can be computed. All summary scores are averaged item scores and are converted to a 0-100 scale, with a high score indicating a high level of participation. The IMPACT-S covers the nine ICF domains of activities and participation.

Impact on Participation and Autonomy (IPA)\(^ {64-68}\)

The IPA is a self-report instrument focused on person-perceived participation and autonomy for use in a wide range of populations. The original instrument consisted of 23 items in 4 domains (social relationships, autonomy in self-care, mobility and leisure, and family role)\(^ {64}\). The updated versions have 5 domains (autonomy indoors, family role, autonomy outdoors, social relations, and paid work and education) and 31 plus 8 additional items to address problem experiences\(^ {65}\). The 31 items for perceived participation are scored by a five-point scale (1, very good; 2, good; 3, fair; 4, poor; 5, very poor). The eight items for perceived problems are scored with a three-point scale (0, no problems; 1, minor problem; 2, severe problem). For each domain, the participation and problem-experience scores are calculated by summing the item scores. The IPA score indicates chance of participation, and a high score shows more restrictions in participation and/or higher problem experience. The IPA covers the six ICF domains of mobility; self-care; domestic life; interpersonal relationships; major life areas; and community, social, and civic life.

Keele Assessment of Participation (KAP)\(^ {60}\)

The KAP is a self-report short instrument of 11 items for use in population surveys assessing the existence and degree of person-perceived participation restrictions. The 11 items are scored by a five-point scale (all the time, most of the time, some of the time, a little of the time, none of the time). Each item is dichotomized to define the presence (some, a little, or none of the time) or absence (all or most of the time) of participation restriction. Total scores are calculated by summing the number of items where restriction occurs (possible score of 0-11). The KAP covers the six
Table 2.1. Characteristics of the familiar instruments for social participation

| Instrument          | Aspects of participation performance | Total Items | Respondent burden | Linking of ICF chapter domain* | Examples of question items for the ICF domain of interpersonal relationships | Response options |
|---------------------|-------------------------------------|-------------|-------------------|-------------------------------|--------------------------------------------------------------------------------|------------------|
| IMPACT-S            | Degree of limitation                | 32          | not reported      | 1 2 3 4 5 6 7 8 9            | • Ask about the existence and degree of experienced limitations on social relations. E.g. general interpersonal interactions | 0, cannot do that at all; 1, major limitations; 2, minor limitations; 3, no limitations whatsoever |
| IPA                 | Degree of goodness or severity for problem | 39          | 20-minute         |                               | • Goodness: 'The quality of my relationship with people who are close to me is...’  
• Problem: 'With regard to your relationships, to what extent does your health or disability cause problems?' | Goodness  
1, very good; 2, good; 3, fair; 4, poor; 5, very poor  
Problem  
0, no problems; 1, minor problem; 2, severe problem |
| KAP                 | Degree of limitation                | 11          | 3 minutes         |                               | • Ask about the existence and degree of restrictions on social relations.  
'During the past 4 weeks, I have met and spoken to other people as and when I wanted.' | 0, no restriction (all or most of the time); 1, any restriction (some, a little, or none of the time) |
| P-Scale             | Degree of limitation                | 18          | 20 minutes        |                               | 'Are you comfortable meeting new people?  
[If sometimes, no or irrelevant] How big a problem is it to you?' | 0, no restriction; 1, some restriction, but no problem; 2, small problem; 3, medium problem; 5, large problem |
| PAR-PRO             | Degree of frequency                 | 20          | not reported      |                               | Ask about frequency of home and community participation in any situations.  
E.g. Intimate relationship with a significant other | 0, did not participate in this life situation; 1, participated monthly, once every 3–4 weeks; 2, participated bi-weekly, once every 2 weeks; 3, participated weekly, 1–4 days per week; 4, participated daily/almost daily, five or more days per week |
| PARTS/M             | Degree of frequency, satisfaction, importance, and independence | 135         | 60-90 minutes (paper-based) 25-40 minutes (web-based) |                               | 1. In a week, how frequently do you have intimate relations with another person?  
2. Is your participation in intimacy limited by ...  
3. How important is it for you to participate in intimacy?  
4. To participate in intimacy, how much choice do you have compared to others without mobility limitations?  
5. How satisfied are you with your participation in intimacy?  
6. How much help from another person do you need to participate in intimacy?  
7. How often do you use accommodations, adaptations or special equipment to participate in intimacy? | 1. More than four times; 1-4 times; Less than once; Never  
2. Illness; A physical impairment; Pain; Fatigue; Not limited  
3. Very important; Somewhat important; Somewhat unimportant; Not important  
4. A lot of choice; Some choice; Little choice; No choice  
5. Very satisfied; Satisfied; Somewhat satisfied; Dissatisfied  
6. A great deal; A moderate amount; Just a little; None  
7. All of the time; Most of the time; Some of the time; A little of the time; Never |
| PM-PAC              | Degree of limitation                | 51          | 45-60 minutes     |                               | During the past week, how many friends or family members have you been in touch with (including those in your home)? | None, one, two or four, five or eight, nine or more |

*The ICF chapter domain: 1, learning and applying knowledge; 2, general tasks and demands; 3, communication; 4, mobility; 5, self-care; 6, domestic life; 7, interpersonal relationships; 8, major life areas; 9, community, social, and civic life.  
IMPACT-S: ICF Measure of Activity and Participation Screener, IPA: Impact on Participation and Autonomy, KAP: Keele Assessment of Participation, P-scale: Participation scale, PAR-PRO: Participation Profile, PARTS/M: Participation Survey/Mobility, PM-PAC: Participation Measure for Post-Acute Care, POPS: Participation Objective Participation Subjective, ROPP: Rating of Perceived Participation, CHART: Craig Handicap Assessment and Reporting Technique, CIQ: Community Integration Questionnaire, WHODAS II: World Health Organization Disability Assessment Schedule II
| Instrument | Aspects of participation measurement | Total Items | Response burden | Linking of ICF chapter domain | Examples of question items linking of the ICF domain of interpersonal relationships | Response options for the examples of question items |
|------------|------------------------------------|-------------|-----------------|-----------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| POPS       | Degree of frequency, satisfaction, and importance | 26          | not reported    | 1 2 3 4 5 6 7 8 9           | • Objective participation How many times in a typical week/month do you socialize with relatives, by phone or at home?  • Subjective participation (satisfaction) Would you say the amount you engage in socialize with relatives, by phone or at home is satisfactory for you?  • Subjective participation (Importance) How important is to socialize with relatives, by phone or at home to your satisfaction with life? | • Objective participation Frequency of occurrence of the activity in a week  • Subjective participation (satisfaction) 3, same; 2, less; or 1, more  • Subjective participation (Importance) 4, most; 3, very; 2, moderate; 1, little; or not important |
| ROPP       | Degree of limitation, satisfaction, and want to support | 22          | 15–30 minutes   | 1 2 3 4 5 6 7 8 9           | • Ask about level of perceived participation in social relationships. ‘FULL PARTICIPATION is when one has an intimate relationship in the way and when one wants.’  • Ask about satisfaction with the level of participation and want to support from the rehabilitation team to change the level of participation | |
| CHART      | Degree of handicap                   | 32          | 15 minutes      | 1 2 3 4 5 6 7 8 9           | How many relatives (not in your household) do you visit, phone, or write to at least once a month? | Add the number of children in household and number of other relatives in household to number of relatives contacted monthly. Multiply by 5. A maximum score for this component is 25 points. |
| CIQ        | Degree of handicap                   | 15          | 15 minutes      | 1 2 3 4 5 6 7 8 9           | Approximately how many times a month do you usually visit your friends and relatives? | 0, seldom/never; 1, 1-4 times; 2, 5 or more |
| WHODAS II  | Degree of difficulty                 | 36          | 20 minutes      | 1 2 3 4 5 6 7 8 9           | In the past 30 days, how much of a problem did your family have because of your health problems? | 1, no difficulty; 2, mild difficulty; 3, moderate difficulty; 4, severe difficulty; and 5, extreme difficulty or cannot do |

*The ICF chapter domain: 1, learning and applying knowledge; 2, general tasks and demands; 3, communication; 4, mobility; 5, self-care; 6, domestic life; 7, interpersonal relationships; 8, major life areas; 9, community, social, and civic life.

IMPACT-S: ICF Measure of Activity and Participation Screener, IPA: Impact on Participation and Autonomy, KAP: Keele Assessment of Participation, P-scale: Participation scale, PAR-PRO: Participation Profile, PARTS/M: Participation Survey/Mobility, PM-PAC: Participation Measure for Post-Acute Care, POPS: Participation Objective Participation Subjective, ROPP: Rating of Perceived Participation, CHART: Craig Handicap Assessment and Reporting Technique, CIQ: Community Integration Questionnaire, WHODAS II: World Health Organization Disability Assessment Schedule II
ICF domains of mobility; self-care; domestic life; interpersonal relationships; major life areas; and community, social, and civic life.

**Participation Scale (P-scale)**

The P-scale is an 18-item instrument assessing the severity of participation restrictions for people with leprosy, spinal cord injury, and polio or other conditions. The 18 items are scored by a five-point scale (0, no restriction; 1, some restriction, but no problem; 2, small problem; 3, medium problem; 5, large problem). Items are summed to obtain a total score ranging from 0 to 90. The P-scale score is interpreted as grades of participation restrictions with 0-12 indicating no significant restriction, 13-22 mild restriction, 23-32 moderate restriction, 33-52 severe restriction, and 53-90 extreme restriction. The P-scale covers the eight ICF domains of learning and applying knowledge; communication; mobility; self-care; domestic life; interpersonal relationships; major life areas; and community, social, and civic life, except for general tasks and demands.

**Participation Profile (PAR-PRO)**

The PAR-PRO is a 20-item interview-based instrument assessing the frequency of home and community participation. The 20 items are scored with a five-point scale (0, did not participate in this life situation; 1, participated monthly, once every 3-4 weeks; 2, participated biweekly, once every 2 weeks; 3, participated weekly, 1-4 days per week; 4, participated daily/almost daily, five or more days per week). The original five-point score categories of 1 and 2 are combined into a category of 1 (activity occurred at least once a month but less than weekly), scoring categories of 3 and 4 combined into a category 2 (activity occurred at least once a week), and category 0 remained unchanged (activity did not occur) to yield a global participation score. Items are summed to obtain a total score ranging from 0 to 40. The PAR-PRO covers the five ICF domains of mobility; domestic life; interpersonal relationships; major life areas; and community, social, and civic life.

**Participation Survey/Mobility (PARTS/M)**

The PARTS/M is a self-report instrument of 135 items assessing the generic participation of people with mobility impairments. The 135 items evaluate participation in 20 activities across the 6 ICF domains of mobility; self-care; domestic life; interpersonal relationships; major life areas; and community, social, and civic life. The scoring of each item is complex and based on principal component analysis results. Each of the 20 activities is evaluated by 6-8 questions based on frequency or time spent; importance, choice, and satisfaction; health-related limitations; and personal assis-
Participation Measure for Post-Acute Care (PM-PAC)70

The PM-PAC is a self-report instrument of 51 items assessing participation in outpatient or home care settings. The 51 items evaluate participation across the seven ICF domains of communication; mobility; self-care; domestic life; interpersonal relationships; major life areas; and community, social, and civic life. The PM-PAC provides seven domain scores and two overall scores (social and home, and community). Higher scores indicate greater participation and satisfaction. However, no scoring algorithm is publicly available. The PM-PAC is complicated because it includes 12 different response options depending on each item.

Participation Objective, Participation Subjective (POPS)71

The POPS is an interview-based generic instrument assessing participation for any population. The instrument measures 26 activities across 5 domains of domestic life (8 activities); interpersonal relationships (8 activities); major life areas (3 activities); transportation (2 activities); and community, social, and civic life (5 activities). For each of the 26 activities, there are 3 questions, giving a total of 78 items. The first measures the frequency or duration of engagement (objective participation), the second measures how important engagement in the activity is, and the third refers to whether they would like to change their current level of engagement (subjective participation).

Scoring for the POPS is relatively complex and normalized using data from a sample of patients with traumatic brain injury and those with no disability. For objective participation, response options are measured as amounts: percentage of the activity that an individual is responsible for (domestic life domain); the number of hours per day, week, or month the activity is engaged in (major life areas domain); or the frequency of occurrence of the activity in a day, week, or month (all other domains). For scoring objective participation, all hour and frequency items are converted to a single base, frequency, or duration per month. Standardized scores are then calculated by subtracting the mean score for the item from each person’s raw score for each item for the combined population norm and dividing by the standard deviation for the population. To control for outliers, standardized scores are set to −3 and +3. Standardized scores are then weighted by a factor that was the average of the mean importance rating of the population so that all items do not have equal weight (things that are done more have a greater weight). The score range for objective participation is −3 to 3, and the total score for objective participation is calculated as the average of the weighted standardized scores of the 26 items. Subscale scores can be calculated as the average standardized scores for the standardized samples. For subjective participation, the importance of each of the 26 activities to well-being is coded using the response options for how important (4, most; 3, very; 2, moderate; 1, little; or not important) and any change to current level of engagement (3, same; 2, less; or 1, more). For each of the 26 items, multiply the importance score by the satisfaction score, where a person who is wanting less or more is scored as −1 and his or her being satisfied with the current level is scored as +1. Scores can range from +4, indicating a most important area of life that the person is engaging in at a satisfactory level, to −4, indicating an equally important area of life that the person wants to do either less of or more. The score range for subjective participation is −4 to 4, and the subjective participation total score is the mean of the 26 activities. A computer is necessary to score this tool. Higher scores indicate greater participation.

Rating of Perceived Participation (ROPP)72

The ROPP is a self-report instrument assessing the level of perceived participation of a person. A total of 22 items evaluate participation across the 7 ICF domains of communication; mobility; self-care; domestic life; interpersonal relationships; major life areas; and community, social, and civic life. The 22 items of perceived participation are scored by a five-point scale (0, not restricted, not applicable; 1, mildly restricted; 2, moderately restricted; 3, very restricted; 4, severely restricted). Items are summed to obtain a total participation score ranging from 0 to 88. Questions about satisfaction with and desired support in changing the rated level of participation (yes/no) are additionally linked to each of the 22 items. An increasing score means increasing participation restriction.

Craig Handicap Assessment and Reporting Technique (CHART)73,74

The original CHART is an interview-based instrument of the degree to which impairments and disabilities result in handicaps based on five domains (physical independence, mobility, occupation, social integration, and economic self-sufficiency) of the International Classification of Impairments, Disabilities and Handicaps (ICIDH) framework75.
The CHART items correspond well to the participation of the five ICF domains of mobility; domestic life; interpersonal relationships; major life areas; and community, social, and civic life. Additional questions addressing the domain of cognitive independence were added to the CHART. The revised version contains 32 items of the ICIDH concept of handicap. Scores on each subscale range from 0 to 100 with a total CHART score ranging from 0 to 600. Higher scores indicate a lower degree of handicaps or a greater degree of social participation.

**Community Integration Questionnaire (CIQ)**

The CIQ is an instrument assessing handicap severity and participation restrictions for people with impairments and disabilities because of traumatic brain injury, chronic illness, or old age. A total of 15 items are divided into 3 domains of community integration: home integration (5 items), social integration (6 items), and productive activities (4 items). The scores report performance frequency, with additional weight given to whether or not assistance was obtained; 12 items are scored on a 3-point scale (0-2) and 3 items (productive employment, school, and volunteer activities) on a six-point scale (0-5). As a result of a summation of the scores from individual questions, the CIQ provides domain subscale and total scores ranging from 0 to 29. The CIQ items correspond to the participation of the five ICF domains of mobility; domestic life; interpersonal relationships; major life areas; and community, social, and civic life. Three additional questions on integration into electronic social networking were added to the CIQ. The revised version of CIQ (CIQ-R) has a total of 18 items across 4 subscales: home integration, social integration, productivity, and participation in electronic social networking.

**World Health Organization Disability Assessment Schedule II (WHODAS II)**

The WHODAS II is a generic self-report instrument to assess health and disability. Three versions of WHODAS 2.0 (36-item, 12-item, and 12 + 24-item version) were developed. The 36-item version consists of 36 Likert-format questions covering 6 domains: cognition, mobility, self-care, getting along, life activities, and participation in society during the previous 30 days. The assessed items of participation domain include social dimensions, such as community activities; barriers and hindrances in the world around the respondent; and problems with other issues, such as maintaining personal dignity. The items are answered in a five-point Likert scale (1, no difficulty; 2, mild difficulty; 3, moderate difficulty; 4, severe difficulty; 5, extreme difficulty or cannot do), grading the difficulty experienced by the respondent in performing a given activity. Each domain is separately weighted and scored. Domain-specific scores for six different domains and a total disability score can be calculated by converting them into a score ranging from 0 to 100. Higher scores indicate higher limitation/ restriction in daily life.

**Consideration in the Assessment of Social Participation**

The usefulness of some instruments has not been fully examined as an assessment specific to older population and are very complex in scoring. They do not specify the interpretation of the results and do not provide specific information. Thus, explicitly stating how clearly these instruments can assess the social participation of older adults whose lifestyles differ from those of children and young adults is not possible.

Although activity and participation constructs are treated as one category with each distinctive definition in the ICF and the discussion on the distinction between the two has not been completed, both activity and participation can be demonstrated by the performance mentioned above. In terms of activity performance, the functional independence measure (FIM) is a well-known assessment for activity centered on self-care; however, it only assesses activity limitation based on the degree of independence. To quantitatively assess the aspects of activity other than the degree of independence (e.g., amount and range of activity), conducting another assessment is necessary. This characteristic of the instrument is also common to social participation, and the participation restriction based on the degree of independence seems to be an outcome different from other quantitative aspects of social participation (e.g., frequency and time of social participation).

Additionally, basic activities of daily living that are common to each person and are carried out daily, and including the domains of activities for the assessment items that are also common to each person is possible. A gold standard, such as FIM, is applicable to assess the basic activities of many older people. In contrast, not everyone is doing all the social participation possible in this world. There is no agreement regarding which domains of social participation should be included in an assessment of participation. In a society, there may be social participation not only common to many older adults but also specialized to each older adult. Any variations in social participation can occur between individuals within a country (society) and between countries (societies), and the domains of “social participation that each person may carry out” and the “social participation that each person actually carries out” are different. Furthermore, what is normal social participation should be discussed with the definition of the concept of social participation, and there is concern that a certain social participation assessment can be defined as “normal social participation.”
Conclusion

Because there are many factors related to diverse social participation and many limitations in the assessment of social participation, selecting the assessment of social participation according to what each clinician or researcher wants to investigate or developing a new assessment according to needs may be necessary. In future research, the common standardized concept and assessment is required, although using the definition, classification, and assessment of participation according to the purpose of research may be one of the important requirements.

References

1. Serrat R, Scharf T, et al.: Fifty-five years of research into older people’s civic participation: recent trends, future directions. Gerontologist. 2020; 60: E38-51.
2. Fu J, Jiang Z, et al.: Global scientific research on social participation of older people from 2000 to 2019: a bibliometric analysis. Int J Older People Nurs. 2021; 16: 1-14.
3. WHO: World Health Organization, Geneva. World Rep Child Inj Prev. 2001.
4. Linden M: Definition and assessment of disability in mental disorders under the perspective of the International Classification of Functioning Disability and Health (ICF). Behav Sci Law. 2017; 35: 124-134.
5. Jette AM, Haley SM, et al.: Are the ICF activity and participation dimensions distinct? J Rehabil Med. 2003; 35: 145-149.
6. Dijkers MP: Issues in the conceptualization and measurement of participation: An overview. Arch Phys Med Rehabil. 2010; 91(9 SUPPL.): S5.
7. Levassieur M, Richard L, et al.: Inventory and analysis of definitions of social participation found in the aging literature: proposed taxonomy of social activities. Soc Sci Med. 2010; 71: 2141-2149.
8. Piškur B, Daniëls R, et al.: Participation and social participation: are they distinct concepts? Clin Rehabil. 2014; 28: 211-220.
9. Bukov A, Maas I, et al.: Social participation in very old age: cross-sectional and longitudinal findings from BASE. J Gerontol. 2002; 57: 510-517.
10. Pan H, Dury S, et al.: Social participation in older adults after relocation to long-term care institutions in China: A qualitative study. J Community Health Nurs. 2020; 37: 164-176.
11. Dappen D, Lambotte D, et al.: Social participation in the daily lives of frail older adults: types of participation and influencing factors. J Gerontol B Psychol Sci Soc Sci. 2020; 75: 2062-2071.
12. Aroogh MD and Shahbooulaghi FM: Social participation of older adults: a concept analysis. Int J Community Based Nurs Midwifery. 2020; 8: 55-72.
13. Hashidate H, Shimada H, et al.: Measuring indoor life-space mobility at home in older adults with difficulty to perform outdoor activities. J Geriatr Phys Ther. 2013; 36: 109-114.
14. Ohnuma T, Hashidate H, et al.: Clinical usefulness of indoor life-space assessment in community-dwelling older adults certified as needing support or care. Nihon Ronen Igakkai Zasshi. 2014; 51: 151-160.
15. Douglas H, Georgiou A, et al.: Social participation as a indicator of successful aging: an overview of concepts and their associations with health. Aust Heal Rev. 2017; 41: 455-462.
16. Herdman M, Fox-Rushby J, et al.: A model of equivalence in the cultural adaption of HRQoL instruments. Qual Life Res. 1998; 7: 323-335.
17. Stevelink SAM and Van Brakel WH: The cross-cultural equivalence of participation instruments: a systematic review. Disabil Rehabil. 2013; 35: 1256-1268.
18. Levassieur M, Gènèreux M, et al.: Importance of proximity to resources, social support, transportation and neighborhood security for mobility and social participation in older adults: results from a scoping study. BMC Public Health. 2015; 15: 1-19.
19. Tomioka K, Kurumatani N, et al.: Social participation and cognitive decline among community-dwelling older adults: a community-based longitudinal study. J Gerontol. 2018; 73: 799-806.
20. Takechi H, Tsuzuki A, et al.: Relationship between subjective memory complaints and social and leisure activities in community-dwelling older people: Toyoake Integrated Care Study. Geriatr Gerontol Int. 2020; 20: 867-872.
21. Kim MJ, Tsutsumimoto K, et al.: Relationships between cognitive leisure activities and cognitive function in older adults with depressive symptoms: A cross-sectional study. BMJ Open. 2020; 10: 1-8.
22. Hikichi H, Kondo K, et al.: Social interaction and cognitive decline: Results of a 7-year community intervention. Alzheimer’s Dement Transl Res Clin Interv. 2017; 3: 23-32.
23. Sakamoto A, Ukawa S, et al.: The association between social participation and cognitive function in community-dwelling older populations: Japan Gerontological Evaluation Study at Taisetsu community Hokkaido. Int J Geriatr Psychiatry. 2017; 32: 1131-1140.
24. Shiba K, Kondo N, et al.: Retirement and mental health: Dose social participation mitigate the association? A fixed-effects longitudinal analysis. BMC Public Health. 2017; 17: 1-10.
25. Tsuij T, Miyaguni Y, et al.: Community-level sports group participation and older individuals’ depressive symptoms. Med Sci Sports Exerc. 2018; 50: 1199-1205.
26. Haseda M, Kondo N, et al.: Community social capital and inequality in depressive symptoms among older Japanese adults: a multilevel study. Heal Place. 2018; 52: 8-17.
27. Yamaguchi M, Inoue Y, et al.: Community social capital and depressive symptoms among older people in Japan: a multilevel longitudinal study. J Epidemiol. 2019; 29: 363-369.
28. Takagi D, Kondo K, et al.: Social participation and mental health: moderating effects of gender, social role and rurality. BMC Public Health. 2013; 13: 1.
29. Amagasa S, Fukushima N, et al.: Types of social participation and psychological distress in Japanese older adults: a five-year cohort study. PLoS One. 2017; 12: 1-12.
30. Tomioka K, Kurumatani N, et al.: Association between social participation and instrumental activities of daily living among
community-dwelling older adults. J Epidemiol. 2016; 26: 553-561.
31) Tomioka K, Kurumatani N, et al.: Age and gender differences in the association between social participation and instrumental activity of daily living among community-dwelling elderly. BMC Geriatr. 2017; 17: 1-10.
32) Tomioka K, Kurumatani N, et al.: The differential effects of type and frequency of social participation on IADL declines of older people. PLoS One. 2018; 13: 1-17.
33) Kanamori S, Kai Y, et al.: Social participation and the prevention of functional disability in older Japanese: the JAGES cohort study. PLoS One. 2014; 9: 1-10.
34) Ashida T, Kondo N, et al.: Social participation and the onset of functional disability by socioeconomic status and activity type: The JAGES cohort study. Prev Med (Baltim). 2016; 89: 121-128.
35) Otsuka T, Tomata Y, et al.: Association between social participation and incident risk of functional disability in elderly Japanese: the Ohsaki Cohort 2006. J Psychosom Res. 2018; 111: 36-41.
36) Takahashi S, Ojima T, et al.: Social participation and the combination of future needs for long-term care and mortality among older Japanese people: a prospective cohort study from the Aichi Gerontological Evaluation Study (AGES). BMJ Open. 2019; 9: 1-7.
37) Ukawa S, Tamakoshi A, et al.: Social participation patterns and the incidence of functional disability: The Japan Gerontological Evaluation Study. Geriatr Gerontol Int. 2020; 20: 765-772.
38) Ide K, Tsuji T, et al.: Social participation and functional decline: A comparative study of rural and urban older people, using Japan Gerontological Evaluation Study Longitudinal Data. Int J Environ Res Public Health. 2020; 17: 617.
39) Sasaki S, Sato A, et al.: Associations between socioeconomic status, social participation, and physical activity in older people during the COVID-19 pandemic: A cross-sectional study in a northern Japanese city. Int J Environ Res Public Health. 2021; 18: 1-10.
40) Kikuchi H, Inoue S, et al.: Social participation among older adults not engaged in full- or part-time work is associated with more physical activity and less sedentary time. Geriatr Gerontol Int. 2017; 17: 1921-1927.
41) Nemoto Y, Sato S, et al.: Longitudinal associations of social group engagement with physical activity among Japanese older adults. Arch Gerontol Geriatr. 2021; 92: 104259.
42) Miyashita T, Tadaka E, et al.: Cross-sectional study of individual and environmental factors associated with life-space mobility among community-dwelling independent older people. Environ Health Prev Med. 2021; 26: 1-8.
43) Sakurai R, Nemoto Y, et al.: Who is mentally healthy? Mental health profiles of Japanese social networking service users with a focus on LINE, Facebook, Twitter, and Instagram. PLoS One. 2021; 16: 1-16.
44) Tomioka K, Kurumatani N, et al.: Association between the frequency and autonomy of social participation and self-rated health. Geriatr Gerontol Int. 2017; 17: 2537-2544.
45) Tomioka K, Kurumatani N, et al.: Positive and negative influences of social participation on physical and mental health among community-dwelling elderly aged 65-70 years: a cross-sectional study in Japan. BMC Geriatr. 2017; 17: 1-13.
46) Otsuki T: Older community residents who participate in group activities have higher daily physical activity levels and lower medical costs. Asia-Pacific J Public Health. 2018; 30: 629-634.
47) Saito M, Aida J, et al.: Reduced long-term care cost by social participation among older Japanese adults: a prospective follow-up study in JAGES. BMJ Open. 2019; 9: 1-7.
48) Nemoto Y, Saito T, et al.: An additive effect of leading role in the organization between social participation and dementia onset among Japanese older adults: the AGES cohort study. BMC Geriatr. 2017; 17: 1-8.
49) Abe T, Okuyama K, et al.: Social participation and physical frailty in older Japanese adults: the Shimane CoHRE study. PLoS One. 2020; 15: 1-11.
50) Abe T, Nofuji Y, et al.: Healthy lifestyle behaviors and transitions in frailty status among independent community-dwelling older adults: the Yabu cohort study. Maturitas. 2020; 136: 54-59.
51) Takatori K and Matsumoto D: Social factors associated with reversing frailty progression in community-dwelling late-stage elderly people: an observational study. PLoS One. 2021; 16: 1-13.
52) Kanamori S, Kondo N, et al.: Social participation and mortality according to company size of the longest-held job among older men in Japan: a 6-year follow-up study from the JAGES. J Occup Health. 2021; 63: e12216.
53) Trost SG, Owen N, et al.: Correlates of adults’ participation in physical activity: review and update. Med Sci Sports Exerc. 2002; 34: 1996-2001.
54) Franco MR, Tong A, et al.: Older people’s perspectives on participation in physical activity: a systematic review and thematic synthesis of qualitative literature. Br J Sports Med. 2015; 49: 1268-1276.
55) Beauchamp MK, Lee A, et al.: Do exercise interventions improve participation in life roles in older adults? a systematic review and meta-analysis. Phys Ther. 2017; 97: 964-974.
56) Fairhall N, Sherrington C, et al.: Do exercise interventions designed to prevent falls affect participation in life roles? a systematic review and meta-analysis. Age Ageing. 2011; 40: 666-674.
57) Magasi S and Post MW: A comparative review of contemporary participation measures’ psychometric properties and content coverage. Arch Phys Med Rehabil. 2010; 91(9 SUPPL.): S17-28.
58) Noonan VK, Kopee JA, et al.: A review of participation instruments based on the International Classification of Functioning, Disability and Health. Disabil Rehabil. 2009; 31: 1883-1901.
59) Willkie R, Jordan JL, et al.: Measures of social function and participation in musculoskeletal populations: impact on Participation and Autonomy (IPA), Keele Assessment of Participation (KAP), Participation Measure for Post-Acute Care (PM-PAC), Participation Objective, and the Participation Scale. Arthritis Care Res. 2011; 63(SUPPL. 11): S325-336.
60) Noonan VK, Kopec JA, et al.: Comparing the content of participation instruments using the international classification of functioning, disability and health. Health Qual Life Outcomes. 2009; 7: 1-12.

61) Chien CW, Rodger S, et al.: Comparative content review of children’s participation measures using the international classification of functioning, disability and health-children and youth. Arch Phys Med Rehabil. 2014; 95: 141-152.

62) Eyssen IC, Steultjens MP, et al.: A systematic review of instruments assessing participation: Challenges in defining participation. Arch Phys Med Rehabil. 2011; 92: 983-997.

63) Post MWM, de Witte LP, et al.: Development and validation of impact-s, an ICF-based questionnaire to measure activities and participation. J Rehabil Med. 2008; 40: 620-627.

64) Cardol M, De Haan RJ, et al.: The development of a handicap assessment questionnaire: the impact on participation and autonomy (IPA). Clin Rehabil. 1999; 13: 411-419.

65) Cardol M, De Haan RJ, et al.: Psychometric properties of the impact on participation and autonomy questionnaire. Arch Phys Med Rehabil. 2001; 82: 210-216.

66) Wilkie R, Peat G, et al.: The Keele Assessment of Participation: a new instrument to measure participation restriction in population studies. Combined qualitative and quantitative examination of its psychometric properties. Qual Life Res. 2005; 14: 1889-1899.

67) Van Brakel WH, Anderson AM, et al.: The Participation Scale: measuring a key concept in public health. Disabil Rehabil. 2006; 28: 193-203.

68) Ostir GV, Granger CV, et al.: Preliminary results for the PAR-PRO: a measure of home and community participation. Arch Phys Med Rehabil. 2006; 87: 1043-1051.

69) Gray DB, Hollingsworth HH, et al.: Participation survey/mobility: psychometric properties of a measure of participation for people with mobility impairments and limitations. Arch Phys Med Rehabil. 2006; 87: 189-197.

70) Gandek B, Sinclair SJ, et al.: Development and initial psychometric evaluation of the Participation Measure for Post-Acute Care (PM-PAC). Am J Phys Med Rehabil. 2007; 86: 57-71.

71) Brown M, Dijkers MP, et al.: Participation objective, participation subjective: a measure of participation combining outsider and insider perspectives. J Head Trauma Rehabil. 2004; 19: 459-481.

72) Sandström M and Lundin-Olsson L: Development and evaluation of a new questionnaire for rating perceived participation. Clin Rehabil. 2007; 21: 833-845.

73) Whiteneck GG, Charlifue SW, et al.: Quantifying handicap: a new measure of long-term rehabilitation outcomes. Arch Phys Med Rehabil. 1992; 73: 519-526.

74) Walker N, Mellick D, et al.: Measuring participation across impairment groups using the Craig Handicap Assessment Reporting Technique. Am J Phys Med Rehabil. 2003; 82: 936-941.

75) Perenboom RJM and Chorus AMJ: Measuring participation according to the International Classification of Functioning Disability and Health (ICF). Disabil Rehabil. 2003; 25: 577-587.

76) Willer B, Ottenbacher KJ, et al.: The community integration questionnaire: A comparative examination. Am J Phys Med Rehabil. 1994; 73: 103-111.

77) Laxe S, Tschiesner U, et al.: What domains of the international classification of functioning, disability and health are covered by the most commonly used measurement instruments in traumatic brain injury research? Clin Neurol Neurosurg. 2012; 114: 645-650.

78) Callaway L, Winkler D, et al.: The community integration questionnaire - revised: Australian normative data and measurement of electronic social networking. Aust Occup Ther J. 2016; 63: 143-153.

79) Üstün TB, Kostanjsek N, et al.: Measuring Health and Disability: Manual for WHO Disability Assessment Schedule WHODAS 2.0. World Heal Organ. 2010; 90.

80) Keith RA, Granger CV, et al.: The functional independence measure: a new tool for rehabilitation. Adv Clin Rehabil. 1987; 1: 6-18.