A Study of Relation between Activity Choice and Personal Interests in Occupational Therapy

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Abstract: This study aimed at addressing the relationship between occupational therapy activities and their values and meaning. This was done by observing the process of interest-based activity selection, verifying Matsutsuyu's six propositions, and by deriving propositions specific to the geriatric Japanese population. The participants were elderly Canadian and Japanese living at home within the community. They were asked about their interests based on the Interests checklist by Matsutsuyu. Data was extracted from the narrative reports of participants about their selected activities, recorded on cards and analyzed using the KJ method. There were 7 participants whose average age was 69.1 in Ontario and 9 participants whose average age was 67.6 in Toshima. Several large group themes emerged with the interpretation of participant narratives; interests are enhanced by interactions with others, created by values and roles, bestowed by a sense of belonging and engendered by competence. Interests also evoke emotional response, create values and enhance the change of occupational form. This study concludes that activities of interest not only relate to hobbies and leisure, but also reflect the combination of social interactions, evoked emotional response, role-awareness, competence, and value the individual experience. This study proposes new propositions specific to Japanese culture that interests are affected by peer relationships and that reduction of motivation and frequency of participation are influenced by socio-environmental factors. There findings underscore the necessity of considering the client's unique profile of social interactions, values, roles, and competence for occupational therapy interventions.

Key Words: interest, activity, activity choice, elderly people, occupational therapy

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I Introduction

The Neuropsychiatric Institute Interest Checklist\(^1\) (NPIIC) developed in 1969 by Matsutsuyu is commonly used by occupational therapists to incorporate client interests into the therapeutic treatment plan. Clients rate level of interest in each of 80 common activities as "strong", "casual", or "no interest". Interests not listed may be added and rated at the bottom of the form. Matsutsuyu's original study was conducted in North America with a subject population of adult Caucasian middle-class psychiatric inpatients. She formulated six propositions: (1) interests are family influenced, (2) interests evoke affective response, (3) interests are choice states, (4) interests can be manifested in effective action, (5) interests can sustain action, and (6) interests reflect self-perception. The NPIIC instrument is based on the frame of reference of Occupational Behavior\(^2\), \(^3\) (OB) ; interests are regarded as a primary intrinsic motivation to support occupational behavior. Therefore, the operational policy of the NPIIC is founded on the conceptualization of OB as the balance between work, rest and play with concomitant interpersonal and task skills that integrate and support the life roles of any socialized individual\(^1\) \(^3\).

II Review of the literature

Since the NPIIC was developed it has been used more often than any other occupational therapy (OT) psychiatric evaluation instrument in the United States, where it is most often introduced in schools\(^4\). Answering to the question why the NPIIC is commonly used, one advantage of the NPIIC that clients with dementia can easily respond by recognizing interests instead of having to recall or generate them\(^5\). Studies which have utilized the NPIIC can be divided into two groups. The first investigates the NPIIC itself by scrutinizing the activities that comprise the checklist. Rogers et al.'s study\(^6\) reorganized the activities in the list considering the operational policy and Kielhofner et al.'s study\(^7\) reduced the volume of activities to 68. Yamada et al.\(^8\) created a new version for the NPIIC specific to a geriatric Japanese population in response to criticism that the activities in the original checklist were not universally applicable. The second group of studies uses the NPIIC to compare groups. For example, it has been reported that individuals with disabilities express interest in a declining number of activities over time\(^9\), and that the geriatric population with disabilities generally shows a lower interest response than their healthy counterparts\(^10\).

In Japan, assessment of interest and leisure are commonly used in the OT setting. Interest and leisure are considered significant relational factors to quality of life, especially in the psychiatric field, and as such are evaluated by 71.2% of psychiatric facilities\(^11\). In 2003, the Japanese Association of Occupational Therapists published the new OT guideline\(^12\) considering the revised International Classification of Functioning, Disability and Health (ICF)\(^13\) and interest is regarded as one factor of activities and participation in the ICF guideline. Furthermore, Law\(^14\) states that OT is in a unique position to contribute to the development and fulfillment of participation for persons with and without disabilities. The interest-based evaluation instrument such as the NPIIC might be expected to have a potential to connect interest and participation.

III The problem

Interest is one of the components to be assessed within OB.\(^1\) \(^3\) The collaboration between a client and a therapist will not succeed if the lifestyle, values, and social environment of the clients are insufficiently considered. The therapists may fail to fully engage the client in therapy, or the client may prematurely terminate therapy\(^15\). While it is relatively easy to find appropriate activities within client capability, it may be difficult to ensure adherence to the treatment plan as part of a daily rou-
tine.\textsuperscript{16} Moreover, because interests reflect preference and are motivated by experiences of pleasure and satisfaction,\textsuperscript{7} interest interviews should not only gather quantitative information, but also address the personal values and perceived meanings of the activities.\textsuperscript{17} Unfortunately, few studies thus far have explored the personal values and meaning of selected interest activities. Borys\textsuperscript{18} used the system model to analyze studies of interest theory, reporting that expressed and manifest interests are incorporated in the orientation to and implementation of daily living activity and that the degree of interest manifested in daily living can be interpreted through an investigation of value.

Investigation of value is a perennially popular topic in sociology and cultural anthropology, these disciplines have discussed value in terms of concepts of self-identification, self-efficacy, autonomy and meaning of life.\textsuperscript{19,20}

IV The purposes of this study

The purposes of this study are: (1) to address the relationship between activities and their values and meanings by observing the process of interest-based activity selection (2) to verify Matsutsuyu's six propositions and (3) to derive propositions specific to the geriatric Japanese population. Over 30 years have elapsed since Matsutsuyu's propositions were originally formulated. Because the Japanese lifestyle is so deeply influenced by Western culture, it is necessary to confirm the relevance of the propositions to contemporary Western culture, as well as to examine them in the Japanese cultural context. Consequently, both North American and Japanese subjects were recruited for this study. It is expected that the development of culturally-specific propositions will be clinically useful for the Japanese occupational therapists in conducting interest interviews and deriving treatment plans for the geriatric clients.

V Method

1. Subjects

The participants were elderly (65 years or older) individuals living at home in community regardless of their health status or dysfunction. Ontario, Canada and Toshima ward in Tokyo, Japan were chosen because the two regions have some similarities; big cities and political centers, almost the same ratio of elderly population (13.4\% or 4.8 million in Ontario in 2001\textsuperscript{21} while 17.7\% or 44,000 in Toshima in 2002\textsuperscript{22}). And, also, the first author was well informed about the two regions. The first author visited some social clubs for elderly people in the two regions, described the study and recruited volunteers. The individuals who showed understanding and agreements for the study were chosen as participants. The time periods of July/August 2002 (Ontario) and November/December 2002 (Toshima) were chosen to avoid special events such as Christmas in Ontario and summer festivals in Toshima.

2. Data collection

The first author visited the participants' houses and obtained informed consent for participation. The first author gave subjects the NPIIC (Table 1) with instruction for its completion, and encouraged subjects to write in additional activities at the end if they wished. Subjects were encouraged to ask the first author for help if necessary. Based on the initial responses, the first author further questioned participants as to why they selected each activity, and how, when, where, how often, and with whom they participated in it. The study was conducted in English in Ontario and in Japanese in Toshima. Filling out the NPIIC and conducting the interview took approximately one hour. Participants were encouraged to talk freely.

3. Data Analysis

The intent of this study was not to quantify the popularity of individual activities, but instead to explore the meaning subjects assigned to the selected activities. The KJ method\textsuperscript{23} was used to
analyze data from participant narratives. The KJ method is named for its inventor, Jiro Kawakita, a cultural anthropologist; it is sometimes described as a creative problem-solving method that distills emergent themes out of large volumes of heterogeneous data. Initial data, whether gathered through fieldwork or generated via brainstorming, are recorded on cards. Cards which express similar concepts are combined into small groups. They are then clustered into middle-sized groups and finally large groups, based on emergent themes. In this study, data was extracted from the narrative reports of participants about their selected activities, recorded on cards and analyzed. In order to ensure reliability, the analysis was conducted by a collaborative process of discussion between the first author and Yamada who created a new Japanese version\(^8\) of the NPIIC.

### VI Results

1. **Subject profiles**

   Table 2 shows the subject profiles. There were 7 participants (3 men and 4 women) in Ontario and 9 participants (3 men and 6 women) in Toshima. The average age was 69.1 years old (men: 71.3, women: 66.8) in Ontario and 67.6 years old (men: 67.0, women: 67.5) in Toshima. The Ontario and Toshima groups were similar in average age and marital status. However, the Canadian subjects were all retired, resided with a spouse, and drove to participate in selected activities. In Toshima, one third of them were still employed and lived in intergenerational households, and most rode a bicycle or walked to pursue the activities.

2. **Cards**

   176 cards were extracted from participant narratives in Ontario and 112 cards in Toshima.

3. **Extraction and interpretation**

   The following examples illustrate the processes of extraction and interpretation.

   Reasons and occupational form were extracted as cards from these narratives and interpreted.

   (a) Ontario: Mrs. A (age 69), a retired nurse who lives with her husband, explained:

   "I'm crazy about going to casinos recently. It's just fun. It's seven minutes drive from here (her house). I wouldn't go if it took longer to get there."

   The phrases "I'm crazy" and "just fun" was extracted and interpreted as the emotion of enthusiasm and enjoyment, and "seven minutes drive from here. I wouldn't go if it took longer" was interpreted as the physical aspect of accessibility and also the use of community resources.

   (b) Toshima: Mr. B (age 65), a retired accountant who lives with his wife, explained:

   "I used to go skiing because of the socialization..."
with people in my workplace. I used to do it almost every weekend in winter. Now I only watch programs about skiing.”

His narration “I used to go because of the socialization in my workplace” and “used to do it almost every weekend” was interpreted as a discontinuation of the interaction with his co-workers because of his retirement; the change of the occupational form with the interaction led to discontinuation of the activity. “Now I only watch programs” was interpreted as the change of occupational form.

4. Synthesis of groups

Fig. 1 illustrates a part of the synthesis of groups with the data from Toshima. Cards were classified according to the interpretations, contents and meaning. Four small groups were made from the individuals who maintained their occupational behavior. The first small group constituted peer relationships: “I do it with my friends”, “Friends ask me to do it”. The second small group constituted familial relationships: “I’m happy because my grandchild liked it”, “I have to do it for my family”. The third small group contained previous professional or collegial relationships: “I used to do it with my colleagues” and “I used to go there because of my duty”. The final group was comprised of community relationships: “I belong to the group and do it every Tuesday” and “become acquainted by walking my dogs”. These four small groups were combined and made a large group I called “Interests enhance interactions with others”.

In the same way, other small and large groups were made.

5. Large groups and emergent themes (Table 3)

(a) Ontario: 8 major groups and additional subgroups (in parentheses) were constructed: 1) interests are enhanced by interactions with others (relationships with family, relationships with relatives); 2) interests evoke emotional response (enjoyment, anxiety); 3) interests are created by values (religion, health-consciousness); 4) interests are created by roles (grandparenthood, group leadership); 5) interests are bestowed by a sense of belonging (interaction with family, perception of being a group member); 6) interests are engendered by competence (external approval); 7) interests enhance the change of occupational form (teaching grandchildren); and 8) interests are maintained by accessibility (perception of ease of activity, physical accessibility).

(b) Toshima: 8 major groups and additional subgroups (in parentheses) were constructed: 1) interests are enhanced by interactions with others (relationships with friends, relationships with families, relationships with colleagues); 2) interests evoke emotional response (enjoyment, nostalgia); 3) interests are created by values (altruism, health-consciousness); 4) interests are created by roles (familial obligation, development of new familial roles); 5) interests are bestowed by a sense of belonging (previous collegial relationships, present acquaintances); 6) interests are engendered by competence (external gratification, self-perception); 7) interests enhance the change of occupa-

<table>
<thead>
<tr>
<th>Table 2 Subject profiles</th>
<th>Ontario</th>
<th>Toshima</th>
</tr>
</thead>
<tbody>
<tr>
<td>subjects (n)</td>
<td>male 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>female 4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>total 7</td>
<td>9</td>
</tr>
<tr>
<td>average age</td>
<td>male 71.3±4</td>
<td>67.0±2</td>
</tr>
<tr>
<td></td>
<td>female 66.8±6</td>
<td>67.5±3</td>
</tr>
<tr>
<td></td>
<td>total 69.1±9</td>
<td>67.6±3</td>
</tr>
</tbody>
</table>
| employed status         | all retired | 5 (m2,f3)
|                         | self-employed | 2 (m1,f1) |
|                         | employed part-time | f1
|                         | never employed | f1
| language                | English | Japanese |
| resided with            | a spouse | 7 |
|                         | a single child | 1 |
|                         | three generations | 2 |
| marital status          | all married | all married |

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**Fig. 1** Interests are enhanced by interactions with others

**Table 3** Meaning of activity selection and key words

<table>
<thead>
<tr>
<th>Large Groups</th>
<th>Ontario</th>
<th>Toshima</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) interests are enhanced by interactions with others</td>
<td>family, relatives</td>
<td>friends, colleagues, family</td>
</tr>
<tr>
<td>2) interests evoke emotional response</td>
<td>enjoyment, anxiety</td>
<td>enjoyment, nostalgia</td>
</tr>
<tr>
<td>3) interests are created by values</td>
<td>religion, health</td>
<td>altruism, health</td>
</tr>
<tr>
<td>4) interests are created by roles</td>
<td>grandparents, group leadership</td>
<td>familial, new roles</td>
</tr>
<tr>
<td>5) interests are bestowed by a sense of belonging</td>
<td>family membership</td>
<td>friends, old colleagues</td>
</tr>
<tr>
<td>6) interests are engendered by competence</td>
<td>external approval</td>
<td>external gratification, self-perception</td>
</tr>
<tr>
<td>7) interests enhance the change of occupational form</td>
<td>teaching grandchildren</td>
<td>TV, literature</td>
</tr>
</tbody>
</table>

8) interests are maintained by accessibility; perception of ease, physical accessibility

8) loss of interests and reduction of frequency are not arbitrary; ability, socio-environmental factors

Responses from Toshima subjects showed a trend toward reduction of motivation and activity frequency (but not complete abandonment of the...
activity). These responses fell into two groups. The first attributed declining levels of participation to reduced physical ability and aging process ("I can't see and hear it clearly" and "I'm getting clumsy"). The second group of subjects invoked socio-environmental factors to explain diminished interest levels such as retirement ("I used to do it with my colleagues before my retirement"), changing relationships ("I don't feel like doing it because nobody asks me to do it"), change in role ("I don't have to do it because I'm not in charge of it"), external variables ("My favorite sumo wrestler is retired" and "My favorite singer passed away") and low priority ("I don't bother to do it" and "I can't afford to do it").

6. Comparison of Ontario and Toshima populations

Several common large group themes emerged with interpretation of participant narratives in Ontario and Toshima: 1) interests are enhanced by interactions with others, 2) interests evoke emotional response, 3) interests are created by values, 4) interests are created by roles, 5) interests are bestowed by a sense of belonging, 6) interests are engendered by competence and 7) interests enhance the change of occupational form. However the constituent subgroups varied between Ontario and Toshima populations.

There were also other notable differences between the two populations. In Ontario, all participants asserted the importance of their family relationships, especially citing religious values, a strong sense of family membership and belonging, and the importance of the grandparent role. Perception of ease of activity and physical accessibility were also invoked. In Toshima, the majority of participants declared the importance of peer relationships and previously held collegial relationships, placing particular value on the sense of being needed by others. It was also found that loss of interests and reductions of frequency were not arbitrary, but instead were directly related to decreasing physical capability and changing socio-environmental variables.

VII Discussion

The first purpose of this study was to address the relationship between activities and their values and meanings. The interviews revealed that a variety of factors— including relationships, values, roles, environment and social factors —influenced interest. Carlson summarizes the mediators of occupational perseverance and concludes that the cognitive, affective/motivational, and physical changes that may accompany participation in an occupation are presumed to influence each other. Previous studies have examined the correlations between interest and such factors as hobbies and leisure. The present study concludes that activities of interest not only relate to hobbies and leisure, but also reflect the combination of social interactions, evoked emotional response, role-awareness, competence, and value the individual experiences.

The second purpose of this study was to verify the Matsutsuyu's propositions. Table 4 shows the comparisons between the six propositions and the results from this study. The six propositions appear to be echoed by the large group themes developed in this study (in parentheses): 1) interests are family influenced (interests are enhanced by interaction with others); 2) interests evoke affective response (interests evoke emotional response); 3) interests can be manifested in effective action (interests are created by values, interests are created by roles, interests are bestowed by a sense of belonging, interests are engendered by competence, interests are enhanced by interaction with others, interests evoke emotional response); 5) interests can sustain action (interests are created by values, interests are created by roles, interests are engendered by competence, interests are enhanced by interaction with others, interests are maintained
by accessibility); and (6) interests reflect self-perception (interests are created by values, interests are created by roles, interests are engendered by competence, interests are enhanced by interactions with others). Matsutsumi's third proposition, that interests are choice status, was not independently verified by this study, but instead accepted, as evidenced by the use of the NPIIC questionnaire. Reilly states that individuals desire to be competent and to achieve daily activities therefore it is needed to have roles to bring their abilities out. The participants in this study measured their competency by external approval and gratification, a finding which may be consistent with previous reports that happiness in the elderly is contingent on a sense of usefulness.

The third purpose of this study was to establish the new propositions specific to Japanese culture. This study concludes: (1) interests are affected by peer relationship which is, in turn, motivated by the value of helpfulness; (2) reduction of motivation and frequency of participation are influenced by socio-environmental factors. Those propositions speak to the necessity of considering the client's unique profile of social interactions, values, roles, and competence when choosing OT activities.

Several of the findings of this study are consistent with those reported by other authors. Subjects in this study, for example, ascribed a great deal of value to their peer relationships. The literature shows that levels of informal participation in activities with peers correlate the reported life satisfaction in the elderly and that peer relationships in the geriatric population may be quite limited and impacted by death. Moreover, the proposition from this study that occupational termination may be mediated by external factors reflects Carlson's identification of variables that decrease participation: unpleasant and psychologically unfulfilling experiences, completion of an externally circumscribed task. He concludes that an increased awareness of the factors that lead to the initiation and sustaining of involvement with particular occupations holds promise for enhancing therapeutic efficacy.

The limitations of this study are the participants and the method. The Grounded Theory

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Table 4 The comparisons between six propositions and the results

<table>
<thead>
<tr>
<th>The six propositions</th>
<th>The result of this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. interests are family influenced</td>
<td>1) interests are enhanced by interactions with others</td>
</tr>
<tr>
<td>2. interests evoke affective response</td>
<td>2) interests evoke emotional responses</td>
</tr>
<tr>
<td>3. interests are choice states</td>
<td>(discriminating their interests in the list)</td>
</tr>
<tr>
<td>4. interests can be manifested in effective action</td>
<td>3) interests are created by value, 4) interests are created by roles, 5) interests are bestowed by a sense of belonging, 6) interests are engendered by competence, 1) interests are enhanced by interactions with others, 2) interests evoke emotional responses</td>
</tr>
<tr>
<td>5. interests can sustain action</td>
<td>3) interests are created by values, 4) interests are created by roles, 6) interests are engendered by competence, 1) interests are enhanced by interactions with others, 8) interests are maintained by accessibility</td>
</tr>
<tr>
<td>6. interests reflect self-perception</td>
<td>3) interests are created by values, 4) interests are created by roles, 6) interests are engendered by competence, 1) interests are enhanced by interactions with others</td>
</tr>
</tbody>
</table>
Approach\textsuperscript{26}) could be chosen to address the process of changing occupational forms and the theoretical sampling. According to the theory, some varieties of people would be chosen in consideration of educational and financial background, marital status, living alone and so on.

The sample size seems very small but it would be adequate on the basis of McCracken's estimate\textsuperscript{27}) which qualitative, exploratory studies require 8 informants to obtain an adequate amount and range of information.

Further study in the field of OT is required to examine what kinds of interactions and roles maintain individual competence, interests and participation. OT is expected to fill a role of developing participation as Law\textsuperscript{14}) states, so that it could be important that a new evaluation instrument based on the NPIIC and the propositions from this study is invented.

In summary, this study suggests that activities of interest not only relate to hobbies and leisure, but also reflect the combination of interactions with others, evoked emotional response, role-awareness, competence, and value the individual experiences. This study presents new propositions specific to Japanese culture: first, that interests are affected by peer relationships, which in turn are motivated by the value of helpfulness, and second, that socio-environmental factors influence reduction of motivation and frequency of participation. These findings underscore the necessity of considering the client's unique profile of social interactions, values, roles, and competence when choosing OT activities.

Acknowledgements

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Reference

要旨：本研究の目的は、作業療法対象者の「興味ある活動」とその価値および意味の関係を検討し、我が国の高齢者の「興味ある活動」に関する仮説を導くことであった。家庭生活を営む高齢者（カナダ人7名、日本人9名）を対象に、興味チェックリストに該当する者による記入、面接による「興味ある活動」への参加状況の確認が行われた。データがKJ法により288枚にカード化、分析された結果、対象者の語りの解釈より幾つかのグループテーマが浮上した。興味は対人交流により促進され、価値感、役割、有能感、所属感により生み出され、情緒的反応を喚起し、作業形態の変化を促進していることが分かった。特に日本の高齢者は「興味ある活動」の価値を高める要因として他者の役に立つ感覚、友人との交流を挙げていた。「興味ある活動」は、個人の経験に基づく社会的交流、情緒的反応、役割、有能感、価値等が複雑に関連するものであり、これらの要因は、対象者の作業選択において今後、作業療法士がさらに配慮すべきであることが示唆された。

キーワード：興味、活動、活動選択、高齢者、作業療法

(2004年6月9日 原稿受付)