Relationships between Self-efficacy and Collective Efficacy at the Family/Community Level and Mental Health among Families of Special Olympics Athletes

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The purpose of this study was to investigate the relationships between perceptions of self-efficacy and collective efficacy at the family/community level and mental health status among the families of Special Olympics athletes. The study participants were 96 parents of people with intellectual disabilities. Volunteer coaches in the sports program distributed the questionnaires to parents (who had provided consent) either during the program or after the program ended. The survey results showed that the fathers’ perceived efficacies at the family level were significantly higher than the mothers’. For the fathers, self-efficacy and collective efficacy at the community level was significantly related to current mental health status. In comparison, perceptions for all four efficacies (especially collective efficacy at the community level) were significantly related to mental health among the mothers. In conclusion, it may be important to enhance the sense of self-efficacy and collective efficacy of Special Olympics families towards their community related to improve their mental health. Furthermore, development of a Special Olympics sports program that considers the mental health of the family is recommended.

Keywords: adapted sport, people with intellectual disabilities, parent, sport program, social capital

1. Introduction

Special Olympics provides year-round sports training and athletic competition in a variety of sports for people with intellectual disabilities. Special Olympics is the largest sports organization in the world for people with intellectual disabilities, with nearly 4 million athletes (people with intellectual disabilities) and millions more volunteers and supporters. Special Olympics helps make society better for people with intellectual disabilities, volunteers, and family members (Special Olympics, 2013).

Families of Special Olympics athletes are important associate participants in Special Olympics. As stated on the Special Olympics web site, “Special Olympics is a support network that brings families together in a caring, positive way—and that makes the cheers for our athletes even louder” (Special Olympics, 2013). However, the families of Special Olympics athletes have not received the same amount of attention as the athletes with intellectual disabilities have received. Moreover, the families of individuals with intellectual disabilities might affect their sports activities (i.e., by supporting their physical activity) (Arai et al., 2011).

For many people with restrictive disabilities, the family represents a central part of their lives and is critical to their emotional well-being. Because family members of individuals with disabilities often have unfavorable physical and mental health (Arai et al., 2008), it is important to provide support for these family members. A previous study suggested that the parents of children with disabilities had increased levels of stress, negative affects, and physical symptoms (Seltzer et al., 2009). Olsson and Hwang (2001) reported that mothers of intellectually disabled children were at a greater risk for depression. Hedov et al. (2002) determined that parents of Down’s syndrome patients perceived more stress than parents of children in a control group. Within
families that have individuals with disabilities, there is a strong relationship between various social factors and physical and mental health (Arai et al., 2008).

Hence, it seems that the relationship between family members and local community residents is an important social resource for families of individuals with disabilities. Because it is desirable for both family members and community residents to assist and support each other, perceptions of self-efficacy and collective efficacy are key social variables that could underlie the mental health of families of individuals with disabilities. Self-efficacy is the belief in one’s capabilities to achieve a goal or an outcome, and collective efficacy is the belief in a group’s capabilities to achieve a goal or an outcome (Bandura, 1977, 1986).

Schneewind (1997) pointed out the need to investigate familial antecedents related to the development of self-efficacy beliefs. Subsequently, Teufel-Shone et al. (2005) investigated the consequences of a family-based diabetes program on the perceived collective efficacy for families to make health-related behavioral changes. They confirmed that this program significantly increased the collective efficacy for the family’s ability to change their dietary habits and physical activities. Recently, Pepe et al. (2008) found that adolescents’ beliefs in family efficacy to operate as a whole system to accomplish tasks necessary for family functioning resulted in their less frequent use of alcohol, tobacco, and cannabis.

Collective efficacy perception is one part of the social capital that includes a psychological sense of community, neighborhood cohesion, and community competence (Lochner et al., 1999). Sampson et al. (1997) confirmed that perceived collective efficacy was a meaningful mechanism through which the negative influences of indigent community resources and social instability affected the amounts of violent activity. Several other studies also asserted that perceptions of community efficacy were influential. Wilson et al. (2009) suggested that individuals who had little appreciation for social aspects of their neighborhood were more likely to have two or more chronic conditions and other health problems. Moreover, Bandura (2001) suggested that many contemporary conditions of life debilitating collective efficacy. He also suggested that people could have a large factional influence, but attained less collectively because of mutual immobilization.

In consideration of these previous studies, in the present study, I considered the efficacy concept on family members and community members to assist and support each other’s lives, even under difficult circumstances. Specifically, I prepared the exploratory items to measure the concepts of self- and collective efficacies for family members and for community members. Thus, the purpose of this study was to investigate the correlations between reported self- and collective efficacies for families and communities and mental health among the family members of Special Olympics athletes. This was based on the hypothesis that self- and collective efficacies for families and communities are, on the whole, connected with mental health.

2. Methods

2.1. Participants and procedures

The program participants were primarily people with intellectual disabilities, and the program accepted athletes who could not play well. Questionnaires were initially distributed to about 150 family members, of which questionnaires were collected from 104. Surveys were excluded if there were missing responses for 2 or more items for gender, age, and various mental health items (6 items) and for 4 efficacy items. Ultimately, 96 parents were included in this study.

This study was conducted with anonymity and non-compulsion. Volunteer coaches in the sports program distributed the questionnaires to parents (who had provided consent) either during the program or after the program ended. When possible, participants brought the questionnaires home, and the spouses of the participants also filled out the questionnaires. In this case, the participants were asked to return the completed surveys on the next day of the program, where they were then collected.

2.2. Measures

The content of the questionnaire is described below. The majority of the questions were related to the family members themselves. In particular, with regard to efficacy, we used a single exploratory item to evaluate self-efficacy and collective efficacy for the following reasons: 1) there was no sufficient measure in Japan; 2) to prevent limit participant burden in-
creasing number of items; and 3) to get an overview of the field.

2.2.1. Demographic data
Demographic data of the participants were obtained via questions on gender, age, and whether they had full-time employment. In addition, data were obtained regarding their children with intellectual disabilities. These questions included their children’s gender and age.

2.2.2. Mental health
Mental health was measured using the subscale of “depression and anxiety” according to the Stress Response Scale (SRS-18: Suzuki et al., 1997). This consisted of 6 items (i.e., “I am in a sad mood”) and is a reliable (test-retest reliability and internal consistency) and valid (discriminant validity) scale that measures personal feelings of stress and anxiety. This scale has been confirmed to be useful for a wide range of ages (Suzuki et al., 1997). The instructions on the questionnaire stated, “Please indicate how applicable the following are to your feelings and behavior in the past week” on a scale of 0 to 3. The total score for 6 items ranged from 0 to 18 points. There were two participants who did not respond to 1 of 6 items. In these two cases, the overall point average for the individual was substituted for the response that was missing.

2.2.3. Self-efficacy for families/communities
The graded response item for self-efficacy at the family level was “I can assist and support my family even under difficult circumstances.” The response item for self-efficacy at the community level was “I can assist and support people in my community even under difficult circumstances.” The participants were asked to respond using 11 grades ranging from 0 (“I think I am absolutely unable to do so”) to 50 (“I think I am not able to say”) to 100 (“I think I can absolutely do so”).

2.2.4. Collective efficacy for families/communities
The graded response item for collective efficacy at the family level was “My family can mutually assist and support each other even under difficult circumstances.” The item for collective efficacy at the community level was “People living in my community can mutually assist and support each other even under difficult circumstances.” The participants were asked to respond using 11 grades ranging from 0 (“I think my family/people living in my community is absolutely unable to do so”) to 100 (“I think my family/people living in my community can absolutely do so”).

2.3. Analysis
The participants were divided into fathers and mothers, and scores were compared between the two groups with a t-test for independent samples. By dividing the participants in this way, given that the number of participants would be reduced, we utilized a non-parametric test in the following analyses. Relationships were determined between the mental health and efficacy scores for each father or mother using Spearman’s rank correlation coefficients. Then, Mann-Whitney U tests were performed to test the difference in mental health between high efficacy groups and low efficacy groups divided by the median for each father or mother.

3. Results

3.1. Demographic data
Study participants included 37 fathers and 59 mothers, of which 42 were full-time workers and 54 were non-full-time workers. Their mean age was 50.84 ± 6.52 years. The internal consistency of the subscale of depression and anxiety was α = 0.90.

3.2. Differences between fathers and mothers
Fathers’ efficacies for their family ratings were significantly higher than were those for mothers; however, their efficacies for community perceptions were not different (Table 1).

3.3. Associations between self-/collective efficacies and mental health
As shown in Table 2, self-efficacy and collective efficacy at the community level were related to mental health for the fathers. By comparison, all four efficacies were significantly related to mental health among the mothers.
Table 1  Mean (SD) and results of t-tests for depression and anxiety and self-/collective efficacies for family/community among fathers and mothers

<table>
<thead>
<tr>
<th></th>
<th>Fathers mean</th>
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<th>Mothers mean</th>
<th>SD</th>
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<tr>
<td>Depression and anxiety</td>
<td>4.06</td>
<td>4.05</td>
<td>37</td>
<td>4.23</td>
<td>4.45</td>
<td>59</td>
<td>0.19</td>
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<tr>
<td>Self-efficacy for family</td>
<td>80.00</td>
<td>17.00</td>
<td>37</td>
<td>68.81</td>
<td>21.66</td>
<td>59</td>
<td>2.67**</td>
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<tr>
<td>Collective efficacy for family</td>
<td>80.54</td>
<td>14.71</td>
<td>37</td>
<td>69.49</td>
<td>21.21</td>
<td>59</td>
<td>2.78**</td>
</tr>
<tr>
<td>Self-efficacy for community</td>
<td>53.24</td>
<td>22.49</td>
<td>37</td>
<td>45.93</td>
<td>20.10</td>
<td>59</td>
<td>1.66</td>
</tr>
<tr>
<td>Collective efficacy for community</td>
<td>46.76</td>
<td>22.37</td>
<td>37</td>
<td>40.68</td>
<td>21.32</td>
<td>59</td>
<td>1.33</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01

Table 2  Correlations between depression and anxiety and self-/collective efficacy for family/community among fathers and mothers

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<tr>
<td></td>
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<td>Collective efficacy</td>
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<td>Collective efficacy</td>
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<tr>
<td>Depression and anxiety</td>
<td>-.19</td>
<td>-.13</td>
<td>-.46**</td>
<td>-.33*</td>
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<tr>
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<th>Mothers</th>
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<tr>
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<td>Self-efficacy</td>
<td>Collective efficacy</td>
<td>Self-efficacy</td>
<td>Collective efficacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression and anxiety</td>
<td>-.33*</td>
<td>-.39**</td>
<td>-.48***</td>
<td>-.48***</td>
<td></td>
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</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001

3.4. Differences in mental health between high-efficacy and low-efficacy groups

For the group of fathers, there were 23 in the low-efficacy group and 14 in the high-efficacy group with regard to self-efficacy for family; there were 22 in the low-efficacy group and 15 in the high-efficacy group with regard to collective efficacy for family; there were 20 people in the low-efficacy group and 17 in the high-efficacy group with regard to self-efficacy for community; and there were 23 in the low-efficacy group and 14 in the high-efficacy group with regard to collective efficacy for community. On the other hand, for the group of mothers, there were 32 in the low-efficacy group and 27 in the high-efficacy group with regard to self-efficacy for family; 30 in the low-efficacy group and 29 in the high-efficacy group with regard to collective efficacy for family; and 23 in the low-efficacy group and 14 in the high-efficacy group with regard to collective efficacy for community.

For the fathers, there were significant differences in mental health in self-efficacy ($U = 287.50, p < .05$) and collective efficacy ($U = 304.50, p < .05$) at the family level and self-efficacy ($U = 257.50, p < .05$) and collective efficacy ($U = 129.50, p < .001$) at the community level.

4. Discussion

In this study I investigated the relationships between perceived self-efficacy and collective efficacy at the family/community level and mental health status among the families of Special Olympics athletes. Parts of our hypotheses were supported.

The most important finding of this study is there were gender differences associated with the relationships between self-efficacy and collective efficacy and mental health. For the fathers, perceived self-efficacy and collective efficacy at the community level were related to mental health status. For the mothers, perceptions of all efficacies were related to mental health. These findings demonstrate that it is important for fathers to feel useful within their community to support their mental health. By comparison, perceptions of efficacies for family or community are related more to the health status of mothers. Moreover, to maintain mental health quality for mothers, an emphasis should be placed on
supporting each other in the family.

Other findings included that perceived self-efficacy and collective efficacy at the family level among fathers was higher than that reported by mothers, although there were no gender differences in perceived self- and collective efficacy at the community level. With regard to community efficacies, both fathers and mothers not only might not have assisted or supported their communities but also might not have been assisted or supported enough by their communities. Regarding perceived efficacies within the family, the fathers might believe that they support their family members mainly through their earning power. Furthermore, it would be interesting in future studies to determine the precise goals/targets of perceived efficacies.

To develop a Special Olympics program that considers the mental health of the family, the program should be carried out as follows: (1) To enhance the fathers’ self-efficacy and collective efficacy for the community, it is preferable to provide an opportunity for the father to demonstrate a specialty, such as sports coaching. (2) In order to increase the mothers’ self-efficacy and collective efficacy for the family and community, the mother should be provided with the opportunity to cooperate and to experience success together with their family members or other volunteers or other Special Olympics family members.

The present study had some limitations. First, it employed a cross-sectional design, so it was difficult to discuss causal relationships. Second, the findings should not be generalized, since the participants were recruited from only one area. Third, due to differing sample sizes, some correlation coefficients were almost identical but achieved different significance levels (e.g., self-efficacy at the family level and mental health), and this cautions against speculative interpretations. Fourth, we evaluated self-efficacy and collective efficacy using a single item. For example, Lee and Bobko (1994) called attention to using a single item measure of self-efficacy. This should be noted when interpreting the results of this study.

Future studies should determine the factors that underlie and mediate perceived self-efficacy and collective efficacy at the family/community level. Bandura (1977) indicated that expectations of personal efficacy are based on four major sources of information: performance accomplishments, vicarious experiences, verbal persuasions, and physiological states. Although there have been many studies that reported perceptions of self-efficacy, few determined factors related to the enhancement of collective efficacy (Tasa et al., 2007), and these studies would be important for community improvement.

In conclusion, it may be important to enhance the sense of self-efficacy and collective efficacy of Special Olympics families towards their community to improve their mental health. Furthermore, development of a Special Olympics sports program that considers the mental health of the family is recommended.

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