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How Parents Perceive and Feel about Participation in Community Activities: The  
Comparison between Parents of Preschoolers with and without Autism Spectrum  
Disorders

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## Abstract

The present study compared how parents of preschoolers with and without Autism Spectrum Disorders (ASD) perceived and felt about participation in community activities. A questionnaire survey was conducted with 380 Hong Kong parents of preschoolers with ASD and 214 Hong Kong parents of preschoolers without ASD. The two groups were not different in their willingness and frequency of participation in community activities. However, the psychological processes underneath their willingness were very different. Among the parents of preschoolers with ASD, their willingness was associated with how they perceived the difficulty and importance of the participation and what emotions they experienced during the activities. This pattern of association was not evident among the parents of preschoolers without ASD.

Keywords: Community Integration, Autism Spectrum Disorders, Parental Perception

How Parents Perceive and Feel about Participation in Community Activities: The Comparison between Parents of Preschoolers with and without Autism Spectrum Disorders

Integration of people with disabilities into the community is the essence of normalization, a philosophy that has had profound impact in the past several decades on services, research, laws and policies involving people with mental or physical disabilities. The word community refers to all the psychological and physical environmental attributes of a residential place (Bramston, Bruggerman, & Pretty, 2002). It may include schools, work places, public areas, and recreation facilities in a geographical area. Many researchers (Beckman et al., 1998; Odom et al., 2004) have pointed out that classroom-based studies are the modal form of research in the literature on community integration. With only a few exceptions (e.g., Dunst, Hamby, Trivette, Raab, & Bruder, 2000; Ehrmann, Aeschleman, & Svanum, 1995; Trivette, Dunst, & Hamby, 2004), most studies in early childhood have focused on integration in the context of educational programs. Integration is actually a concept that implies participation in a broad range of community settings. As school is only one of these settings, there is a need to go beyond the study of integration in education. According to Bronfenbrenner's (1979) ecological model, children's development is affected by a network of interrelated systems which exert mutual influence over one another. In the present study, we set out to study the community integration of young children with Autism Spectrum Disorders (ASD) in settings other than schools.

Previous studies (e.g., Brown & Shearer, 1999; Cook, 2001; Odom, 2000) have indicated consistently that community integration is related positively to the quality of life for children with disabilities. Bramston and his colleagues (2002) argued that

community integration had emerged in the second half of the 20<sup>th</sup> century as the most effective means of instigating positive life experiences for people with disabilities. In fact, people with disabilities have a strong desire for community integration (Kampert & Goreczny, 2007). Parents of children with disabilities also want to have their children around normal children as much as possible so as to learn socially appropriate ways of behaving (Gallagher et al., 2000). Actually, community activities offer a rich mix of learning opportunities to people with disabilities, particularly those of a young age. In a series of studies, Dunst and his colleagues found that community activities that brought young children into contact with others had development-enhancing effects (Dunst, Bruder, Trivette, & Hamby., 2006; Dunst, Bruder, Trivette, Hamby, Raab, & McLean, 2001; Dunst, et al, 2000; Dunst, Trivette, Hamby, & Bruder, 2006; Trivette, et al., 2004). They found that the use of community activities as sources of natural learning opportunities was associated with enhanced positive well-being of children, parents, and families.

Despite the development-enhancing effects of community activities, previous studies (e.g, Modell, Rider, & Menchetti, 1997) have shown that young children with moderate to severe developmental disabilities participated overwhelmingly in noninclusive recreation and leisure activities. Watching television and listening to the radio seem to be the most common leisure activities for these children. Given the importance of community activities in the development of young children with disabilities, there is a need to investigate the factors that contribute to their participation in community activities. In view of such a need, the present study examined the psychological mechanisms underlying the willingness and frequency of parents' participation in community activities with their children with ASD.

We focused on children with ASD because of the distinctive difficulty

experienced by these children and their parents in community activities. Children with ASD are characterized by varying degrees of language difficulty, deficiencies in social relationships, social isolation, bizarre stereotyped self-stimulation, inappropriate emotional reactions, and abnormal responses to sensory experiences (Rutter & Schopler, 1987). The disruptive behaviors associated with ASD cause tremendous difficulty with participation in community activities (Kraijer, 2000). The difficulty is exacerbated because ASD is generally not identifiable by physical appearance (Gray & Holden, 1992; Sanders & Morgan, 1997). As a consequence, it is difficult for parents of children with ASD to obtain understanding and accommodation from the general public for the 'weird' behaviors displayed by their children. In their survey with 53 parents of children with ASD, Higgins and his colleagues (2005) found that one-fourth of these parents indicated that normal, spontaneous outings were difficult and their families rarely went out together because of the stressful effect on their children. Most of these parents stated that relatives, friends, teachers, and the community did not understand the behavioral characteristics of children with ASD.

Sanders and Morgan (1997) compared stress and adjustment of three groups of parents: those with a child with ASD, those with a child with Down syndrome, and those whose children were developmentally normal. They found that parents of children with ASD generally reported more family stress and adjustment problems than parents of children with Down syndrome who, in turn, reported more stress and adjustment problems than parents of developmentally normal children. The former two groups of parents reported significantly less family participation in recreational and sporting activities than did parents of developmentally normal children. Sanders and Morgan (1997) pointed out that these activities were often viewed as stress

reducing. The fact that stress reducing activities were less available to parents of children with ASD might be related to their report of more family stress and negative emotions. It is reasonable to speculate that the more the parents of children with ASD perceive the participation in community activities as difficult, the more they will experience negative emotions and the less willing and frequent will be their participation in community activities with their children. Emotions involved in the process may serve as a mediator between the perceived difficulty and how willingly and often they participate in community activities. That is, the more the parents perceive the participation as difficult, the more they will have negative emotions. In turn, the more they have negative emotions, the less willing and frequent will be their participation of community activities with their children.

While difficulty and negative emotions may deter parents from taking their children with ASD to community activities, the perceived importance of community integration may encourage parents to be more engaged in community activities. As Gallagher et al. (2000) found in their study, most parents of children with disabilities were eager to have their children around developmentally normal children as much as possible. They saw inclusive activities as valuable opportunities for their children to learn social skills and appropriate behaviors. It is very likely that the more the parents see the importance of community activities, the more willing and frequent is their participation in community activities with their children with ASD. Perceived importance may serve as the moderator in the relationship between perceived difficulty and how willingly and often the parents are engaged in community activities. As long as the parents see the participation in community activities as important, they will be willing to take their children out for community activities even if the participation is difficult for them.

To better understand the unique psychological processes underlying the behaviors of the parents who have children with ASD, the present study compared the willingness and frequency of their participation in community activities with those parents who have developmentally normal children. We also investigated the factors that might contribute to the willingness and frequency of their participation in community activities. These factors included perceived difficulty and importance in the participation as well as the emotions involved. We tested the mediation effect of emotions in the relationship between perceived difficulty and how willingly and often the parents took their children to community activities. We also tested the moderation effect of perceived importance in the relationship between perceived difficulty and the willingness and frequency of their participation in community activities. The knowledge about the psychological mechanisms in parents' willingness and frequency of participation in community activities would be helpful to the service providers who want to promote community integration for children with ASD.

## Method

### Participants

The participants were 380 Hong Kong parents of children with ASD from 22 special preschool centers and 214 Hong Kong parents of children without disabilities from three typical kindergartens that did not offer inclusive education. The children with ASD had been diagnosed for ASD by psychiatrists or clinical psychologists at the Health Department of the Hong Kong Government before they were placed in the special preschool centers. With the help of the school personnel, questionnaires were sent home to all the parents of children with ASD ( $N = 467$ ) in the 22 special preschool centers as well as all the parents ( $N = 281$ ) in the three typical kindergartens. The response rate of the parents with ASD was 81.80%, as 382 returned the

questionnaires. The response rate of the parents without ASD was 76.16%, as 214 returned the questionnaires. However, the final data analyses only included 594 parents. Two parents of children with ASD were excluded because their children were over 9 years old.

Among the respondents whose children had ASD, the majority (82.3%) were mothers. Fathers made up 16.6% while grandparents and other family members made up 1% of the sample. The majority (92.9%) of them fell into the age range between 30 and 49. Most of them were married (92.7%) and about half of them (45.5%) held a full-time job. In terms of educational background, 7.1% had primary education, 64.9% had secondary education, and 28% had tertiary education or above. The ratio between boys and girls in their children with ASD was 9 to 1. The average age of these children was 4.45 with a range from 1.50 to 7.00 and a standard deviation of .97.

Among the respondents whose children did not have ASD, the majority (67.6%) were also mothers. Fathers made up 23% whereas grandparents and other family members made up 2.8% of the sample. The majority (76.5%) of them fell into the age range between 30 and 49. Most of them were married (90.3%) and about half of them (43.9%) held a full-time job. In terms of educational background, 5.2% had primary education, 61.0% had secondary education, and 26.8% had tertiary education or above. Of their children, the ratio between boys and girls was about 1 to 1. The average age of these children was 3.75 with a range from 1.00 to 6.00 and a standard deviation of 1.08.

The demographics of the two groups of parents were comparable in terms of age, sex, family structure, and education background. However, there were significant differences in the sex ratio and age of their children. Due to the characteristics of ASD,



there were more boys than girls among the children with ASD. In addition, because many autistic children also suffer from developmental delays, the children in our special education sample were older ( $M = 4.45$ ,  $SD = .97$ ) than their counterparts in without ASD ( $M = 3.74$ ,  $SD = 1.08$ ),  $t = 7.80$ ,  $df = 588$ ,  $p < .001$ , Cohen's  $d = .69$ .

### Procedures

The parents completed an anonymous questionnaire at home and returned it to the school personnel who coordinated the survey. Most of the items in this questionnaire were generated in a pilot study by a focus group which was composed of six parents of preschoolers with ASD, six teachers and six therapists from Heep Hong Society, a non-profit social services organization that provides education to children with various disabilities in Hong Kong. The focus group identified the community activities in which children with ASD usually participated and the difficulties involved in their participation. As the special preschool centers of Heep Hong Society also took in toddlers, the community activities discussed in the focus group included those for older as well as younger children.

### Measures

Willingness to participate in community activities. There were four items about willingness in the questionnaire (e.g., 'It is my pleasure to take my child to community activities'). The parents indicated their agreement with these statements on a 4-point Likert scale ranging from 1 (disagree strongly) to 4 (agree strongly). The Cronbach's alpha of the four scores was .88 in this sample, indicating high internal reliability. Results of exploratory factor analysis also showed that 73.10% of the total variance were explained by a single factor, suggesting that the four items tapped the same construct. The scores on these four items were thus averaged to indicate the extent to which the parents were willing to take their children for community

activities. Higher scores indicate higher parental willingness to participate in community activities ( $M = 3.36$ , Range = 1 – 4,  $SD = .60$ ).

Frequency of participation in community activities. We asked the parents to indicate how many times they had taken their children out for community activities in the previous two weeks. These activities excluded going to schools in their regular routine. They wrote down the number in a blank provided in the questionnaire ( $M = 8.31$ , Range = 0 – 70,  $SD = 8.90$ ).

Emotions involved in participation in community activities. This was measured by a scale adapted from the Emotional Functioning Scale (Diener, Smith, & Fujita, 1995). We selected the items that were most relevant to the participation of community activities. The modified scale is composed of 5 clusters of emotions, namely joy, fear, anger, shame, and sadness. Each cluster consists of three emotions. For example, the joy cluster consists of happy, contented, and proud while the shame cluster consists of ashamed, guilty, and embarrassed. The parents indicated how often they felt these 15 emotions when they were out for community activities with their children. Their responses were made on a 7-point scale ranging from 1 (never) through 4 (half and half) to 7 (always). The Cronbach's alphas of the 12 scores for negative emotions and the three scores for positive emotions were .92 and .72 respectively, indicating satisfactory reliability. Exploratory factor analyses also showed that 53.43% of the variance of the scores for negative emotions and 65.72% of the variance of the scores for positive emotions were explained by a single factor, suggesting that each scale tapped a single construct. To measure the frequency of the participants' negative emotions, we averaged the 12 emotions in the fear, anger, shame, and sadness clusters ( $M = 2.52$ , Range = 1 – 6.25,  $SD = 1.10$ ). To measure the frequency of their positive emotions, we averaged the 3 emotions in the joy clusters

( $M = 4.83$ , Range = 1 – 7,  $SD = 1.22$ ).

Perceived importance of community activities. We presented the parents with 25 community activities and asked them to indicate how important it was for them and their children to participate in each of these activities. They made their responses on a 4-point Likert scale ranging from 1 (not important) to 4 (very important). These 25 community activities were identified by the participants in the pilot study as common, and important but difficult for children with ASD. According to the classification developed by Wehman (2006), these activities can be classified into five domains, namely shopping (e.g., shopping at supermarket, shopping at shopping mall), restaurants (e.g., dining out at a fast food restaurant, dining out at a café), transportation and mobility (e.g., taking a public bus, riding on an elevator), health and personal care (e.g., seeing a dentist, having hair cut at a barber's shop), and leisure and recreation (e.g., watching a movie in a cinema, visiting friends and relatives). The Cronbach's alpha of the perceived importance scores in these five domains was .88, indicating a high internal reliability. The results of exploratory factor analyses also showed that 68.73% of the total variance of the five domain scores were explained by a single factor, suggesting that they tapped the same construct. We thus averaged the scores in the five domains to indicate the importance of community activities perceived by the participants ( $M = 2.92$ , Range = 1 – 4,  $SD = .56$ ).

Perceived difficulty of community activities. We also asked the parents to indicate how difficult it was for them and their children to participate in each of the 25 activities listed in the questionnaire. They made their responses on a 4-point Likert scale ranging from 1 (not difficult) to 4 (very difficult). The Cronbach's alpha of the perceived difficulty scores in the five domains was .87, indicating a high internal

reliability. The results of exploratory factor analyses also showed that 67.50% of the total variance of the five scores were explained by a single factor, suggesting that they tapped the same construct. We thus averaged the scores in the five domains to indicate the difficulty of community activities perceived by the participants ( $M = 1.80$ , Range = 1 – 4,  $SD = .56$ ).

## Results

(Insert Table 1 about here)

In our sample, the preschoolers with ASD were significantly older than their counterparts without ASD. To control for any possible age effects on group differences, we ran ANCOVA with age as covariate when we compared the two groups on willingness, frequency, emotions, perceived importance, and difficulty in participation of community activities.

### Willingness for Participation in Community Activities

On average, both groups of parents were willing to take their children out for community activities. As presented in Table 1, there was no significant difference between the two groups. Their scores are considered to be high on a 4-point scale.

### Frequency of Participation in Community Activities

As shown in Table 1, we also found that there was no significant difference in the frequency of taking children out for community activities between the two groups of parents.

### Emotions involved in Participation in Community Activities

Although the two groups of parents were not different in their willingness and frequency of participation in community activities, they were very different in the emotions they experienced during community activities. As shown in Table 1, the parents of preschoolers with ASD experienced positive emotions less often than the

parents of preschoolers without ASD. In addition, they experienced negative emotions more often than the parents of preschoolers without ASD. According to the recommendations of Kittler, Menard, & Phillips (2007), the effect size was considered moderate for positive emotions (Partial  $\eta^2 = .07$ ) and large for negative emotions (Partial  $\eta^2 = .14$ ).

#### Perceived Importance of Community Activities

Table 1 also presents the estimated means of parents' perceived importance of community activities with children's age being controlled. Except for the leisure and recreation domain, the parents of preschoolers with ASD perceived taking part in community activities as more important than the parents of preschoolers without ASD. An examination of the average of the five domain scores showed that the parents of preschoolers with ASD perceived taking part in community activities as more important ( $M = 3.00$ ,  $SD = .58$ ) than the parents of preschoolers without ASD ( $M = 2.78$ ,  $SD = .45$ ),  $F(1, 543) = 20.29$ ,  $p < .001$ , Partial  $\eta^2 = .04$ . However, the effect size was not considered as big.

#### Perceived Difficulty of Community Activities

Table 1 also presents the estimated means of parents' perceived difficulty of community activities with children's age being controlled. Except for the transportation and mobility domain, the parents of preschoolers with ASD reported more difficulty than the parents of preschoolers without ASD. An examination of the average of the five domain scores showed that the parents of preschoolers with ASD perceived taking part in community activities as more difficult ( $M = 1.94$ ,  $SD = .56$ ) than the parents of preschoolers without ASD ( $M = 1.58$ ,  $SD = .51$ ),  $F(1, 539) = 67.55$ ,  $p < .001$ , Partial  $\eta^2 = .11$ . The effect size was moderate.

#### Correlations among the Variables

The correlations among the variables are presented in Table 2. It is noteworthy that frequency was not associated strongly with most variables in either group of parents. We therefore excluded this variable from further analyses. Comparing the patterns of correlation in the two groups of parents, we found that, for the parents of preschoolers with ASD, willingness was related strongly to all the other variables except frequency. In contrast, this pattern was not strong for the parents of preschoolers without ASD.

(Insert Table 2 about here)

### Mediation Analyses of the Relationships among Perceived Difficulty, Emotions, and Willingness

To test whether emotions mediated the relationship between perceived difficulty and willingness in the participation of community activities, we conducted a series of mediation analyses. According to the procedures suggested by Baron and Kenny (1986), there are three requirements for mediation effect. First, there must be a relationship between the independent variable (i.e., perceived difficulty) and the mediator variable (i.e., emotions). Second, the mediator variable and the dependent variable (i.e. willingness) must be related when analyses are adjusted for the independent variable. Third, the direct relationship between the independent variable and the dependent variable (i.e., the zero order correlation between perceived difficulty and willingness) must be reduced significantly once analyses are adjusted for the mediator variable (i.e., emotions).

As shown in the left panel of Figure 1, all three requirements were fulfilled among the parents of preschoolers with ASD. For the first requirement, perceived difficulty were associated negatively with positive emotions ( $\beta = -.37, p < .001$ ) but positively with negative emotions ( $\beta = .44, p < .001$ ). For the second requirement,

positive emotions were associated positively with willingness ( $\beta = .33, p < .001$ ) after perceived difficulty was adjusted for the analyses. In addition, negative emotions were also associated negatively with parents' willingness ( $\beta = -.24, p < .001$ ) after perceived difficulty was adjusted for the analyses. For the third requirement, both positive and negative emotions were important mediators and accounted for the relationship between difficulty and willingness. Positive emotions reduced the correlation between difficulty and willingness significantly from  $-.30$  to  $-.18$ . To examine whether the mediation effect was significant, we conducted the Sobel Test (Sobel, 1982). The results showed that the mediation effect was significant ( $z = -3.46, p < .001$ ). Similarly, negative emotions had reduced significantly the correlation between difficulty and willingness from  $-.30$  to  $-.20$ . The result of the Sobel Test was also significant, ( $z = -4.19, p < .001$ ).

Although both positive and negative emotions were mediators between perceived difficulty and willingness, their mediation effects were partial instead of complete. As shown in the left panel of Figure 1, the direct effect between perceived difficulty and willingness was  $-.18, p < .01$  for the positive emotions analyses and  $-.20, p < .01$  for the negative emotions analyses. Both path coefficients were still statistically significant.

On the contrary, mediation effect, no matter complete or partial, was not evident among the parents of preschoolers without ASD. As shown in the right panel of Figure 1, positive emotions were not related significantly to perceived difficulty among this group of parents ( $\beta = -.02, p > .05$ ). In addition, negative emotions were not related significantly to willingness among them ( $\beta = -.08, p > .05$ ).

(Insert Figure 1 about here)

Relationships among Perceived Importance, Perceived Difficulty, and Willingness

To test whether perceived importance moderated the relationship between perceived difficulty and parents' willingness to take their children out for community activities, we conducted a series of multiple regression analyses. Using the centering procedure suggested by Aiken and West (1991), we regressed willingness on perceived importance, perceived difficulty, and the interaction term between the two. We did the above analyses separately for two groups of parents. We found that both perceived importance and perceived difficulty had main effects on willingness among the parents of preschoolers with ASD. As shown in the left panel of Figure 2, perceived importance was associated positively with willingness ( $\beta = .16, p < .01$ ). In contrast, perceived difficulty was associated negatively with willingness ( $\beta = -.31, p < .001$ ). However, perceived importance and perceived difficulty did not have any interaction effect on willingness ( $\beta = .03, p > .05$ ). The results showed that the more the parents of preschoolers with ASD perceived that the participation in community activities was important, the more they would be willing to take their children out for community activities. In addition, the more they perceived the participation in community activities as difficult, the less they would be willing to take their children out for community activities. However, since there was no interaction effect between perceived importance and difficulty, perceived importance could not compensate for the negative effect of perceived difficulty on willingness.

The above results were not obvious among the parents of preschoolers without ASD. As shown in the right panel of Figure 2, willingness was neither associated significantly with perceived importance ( $\beta = .10, p > .05$ ) nor with perceived difficulty ( $\beta = -.13, p > .05$ ) among this group of parents. In addition, there was also no interaction effect between perceived importance and difficulty ( $\beta = .03, p > .05$ ).

## Discussion



The parents of preschoolers with and without ASD in our study were not different in the willingness and frequency of their participation in community activities. Unlike the studies (e.g., Bramston, et al., 2002; Hill, Rotegard, & Bruininks, 1984; Kaye, 1997; Modell, et al., 1997; Sands & Kozleski, 1994) that showed lower engagement of community activities among individuals with disabilities, the results of the present study indicated that the engagement in community activities of the preschoolers with and without ASD was more alike than different. The discrepancy between the results of our study and the previous ones may be due to the different sample groups involved. Most researchers (e.g., Hill, et al, 1984) who found low participation in community activities studied adults with disabilities in residential care. In contrast, we studied parents of preschoolers with ASD. Despite the disabilities of their children, the parents in our study were willing to take their children out for community activities. These parents were resilient although they perceived more difficulty and experienced more emotional stress than their counterparts whose children were developmentally normal. Our findings are in corroboration with those of Sanders and Morgan (1997), who found that although parents of disabled children reported more stress associated with caring for their children, they generally showed resilience in adjusting to the presence of a severely disabled family member.

The resilience revealed in our study indicated that the similarity between the two groups of parents in their willingness and frequency to participate in community activities was, paradoxically, the result of very different psychological mechanisms. Beneath the surface of similarity, these two groups of parents went through totally different psychological processes. The parents of preschoolers with ASD perceived more difficulty with participating in community activities than the parents of preschoolers without ASD. They also felt more negative emotions and less positive

emotions during the community activities than did their counterparts. In addition, it is noteworthy that they attached more value to the participation and saw it as more important than did the parents of preschoolers without ASD.

In our study there was no association between frequency and most of the contributing factors, including willingness. Disregarding the levels of willingness, both groups of parents took their children out for community activities with similar frequencies. We speculate that actual number of community activities for preschoolers might not be a function of willingness because many community activities might be 'obligatory.' For example, parents had to take their preschoolers along when they did grocery shopping if childcare services were not available. However, willingness, a subjective feeling, was sensitive to many contributing factors among the parents of preschoolers with ASD in our study. We found that emotions mediated the relationship between perceived difficulty and willingness in this group of parents. The more they perceived participation in community activities to be difficult, the more they would have negative emotions and the less they would have positive emotions. In turn, the more negative emotions and the less positive emotions they had, the more unwilling they would be to participate in community activities. Although we did not find any moderation effect of perceived importance in the relationship between perceived difficulty and willingness in this group of parents, we found both perceived difficulty and importance had main effects on willingness. Parents were most willing to take their children with ASD to community activities when they perceived the difficulty to be low and the importance to be high. However, these patterns of association among willingness, perceived difficulty, emotion, and perceived importance were not obvious in the parents of preschoolers without ASD.

Although our study indicates that the willingness and frequency of these parents'

participation in community activities were comparable to those of the parents who had developmentally normal children, it was obvious that the former group of parents experienced more difficulty and emotional stress in the process. Unlike the latter group of parents, their willingness to participate in community activities was sensitive to the difficulty they perceived and the emotional stress they felt. It was also sensitive to the importance they attached to participation in community activities. We speculate that the resilience of these parents might be related to their perception of the importance of community activities. The more importance they attached to these activities might have contributed to their high level of willingness despite the difficulty and emotional stress they experienced.

The findings of the current study have some practical implications for the services to preschoolers with ASD and their parents. Although there are signs that these parents are resilient, service providers still need to relieve them from emotional stress by making the participation of community activities less difficult. In response to the difficult community activities identified by the parents, service providers may develop community-based instruction for integration (e.g., Wehman, 2006) so as to help both preschoolers and parents to overcome the difficulties involved in participation in community activities. In our study, the two most difficult domains identified by the parents of preschoolers with ASD were health and safety (e.g., having hair cut at a barber's shop), and leisure and recreation (e.g., watching a movie in a cinema). It would be helpful if educational programs can be developed to help preschoolers with ASD and their parents to deal with these activities. These programs can consult evidence-based parenting programs, such as Triple P-Positive Parenting Program, which include specific information for parents on dealing with activities that are frequently loaded with high stress (Sanders, 2008; Sanders, Markie-Dadds, Turner,

& Ralph, 2004). Actually, the Heep Hong Society in Hong Kong is now developing instruction manuals for teachers and parents on the procedures of taking children with ASD to various community activities. In addition, it is also important to provide emotional support to the parents of preschoolers with ASD. Given the fact that they experience more emotional stress than the parents of developmentally normal children, mutual support groups or self-help groups would be helpful in supporting them and enhancing their resilience.

The present study reveals the unique psychological processes underneath the willingness of the parents of preschoolers with ASD in the participation of community activities. The findings have contributed to the existing body of knowledge in the community integration of young children with ASD. They also have practical implications for the services for this group of children and their families. Despite its contributions, the present study has some limitations. The severity of child's developmental delay and disability may affect the parents' willingness and frequency of participation in community activities. In our study, we did not have data about the severity of disability among the preschoolers with ASD. We were unable to take this factor into consideration in our analyses. Our sample also included parents of preschoolers as young as one or two years old. The participation in community activities may be very different for toddlers and children of five or six years old. The age range of our sample might have contributed to the discrepancy in findings between our study and previous studies regarding children's participation in community activities (Higgins, et al., 2005; Modell et al., 1997, Sanders & Morgan, 1997). In addition, the cross-sectional and correlational data of the present study leave the causal status among variables ambiguous. We may interpret the correlation between perceived difficulty and willingness with two possibilities. First, when the

parents perceived the participation as more difficult, the less they would be willing in the participation. Second, when the parents were less willing to participate, they would be more likely to see the participation as difficult. The latter possibility is in line with the principle of cognitive dissonance (Festinger, 1957). The parents may justify their unwillingness by seeing the participation as difficult. To determine the directionality of causality, future studies may consider to employ longitudinal designs that allow time series analyses.

Another limitation of the present study lies in its definition of community integration. It focused on participation in community activities, such as shopping, going out for dinner, riding on public buses, having hair cut, and watching a movie in a cinema. High participation in these activities indicates that the children are integrated physically into the community. However, it does not necessarily indicate that they are integrated socially into the community. For example, Solish, Minnes, and Kupferschmidt (2003) found that over 97% of the children with developmental disabilities in their study had involvement in the community by taking part in social activities, such as club participation, shopping, and sporting events, with people without developmental disabilities. However, they poignantly pointed out that half of these children did not have even one close friend with whom they could engage in social activities. They argued that proximity alone does not ensure that the children with developmental disabilities are actually included socially in peer activities and interactions. Physical integration into the community does not necessarily imply social integration. As the present study has focused on participation in community activities, it does not afford in-depth understanding of the social integration of the young children with ASD into the community. To pursue this line of research, future studies need to look into friendship and relationships of these children and explore

what would contribute to their social integration into the community.

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Table 1

Results of ANCOVA and Estimated Means with Children's Age Being Controlled forParticipation, Emotions, Perceived Importance, and Difficulty

	Parents of Preschoolers with ASD	Parents of Preschoolers without ASD	F value	Partial $\eta^2$
Participation in Community Activities				
Willingness	3.35 (.60)	3.39 (.58)	.34	.00
Frequency	8.51 (8.21)	8.29 (10.15)	.06	.00
Emotions				
Positive emotions	4.57 (1.18)	5.27 (1.13)	42.60**	.07
Negative emotions	2.83 (1.07)	1.95 (.81)	91.16**	.14
Perceived Importance				
Shopping	2.83 (.69)	2.61 (.56)	12.53**	.02
Restaurants	2.97 (.78)	2.41 (.68)	62.28**	.10
Transportation and mobility	3.06 (.67)	2.93 (.55)	4.38*	.01
Health and personal care	3.29 (.66)	3.10 (.57)	10.27**	.02
Leisure and recreation	2.87 (.65)	2.78 (.51)	2.77	.01
Perceived Difficulty				
Shopping	1.89 (.66)	1.45 (.54)	58.18**	.10
Restaurants	1.89 (.80)	1.46 (.61)	37.96**	.07
Transportation and mobility	1.50 (.49)	1.45 (.57)	.94	.00
Health and personal care	2.24 (.82)	1.67 (.75)	58.59**	.10
Leisure and recreation	2.17 (.66)	1.58 (.55)	101.45**	.16

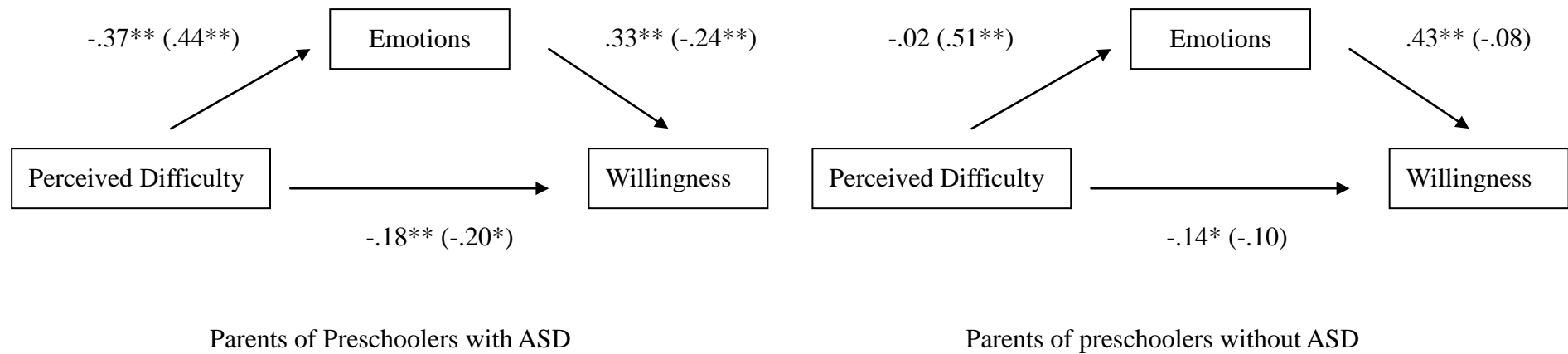
Note. Numbers in parentheses are standard deviations. \*  $p < .05$ , \*\*  $p < .01$ .

Table 2

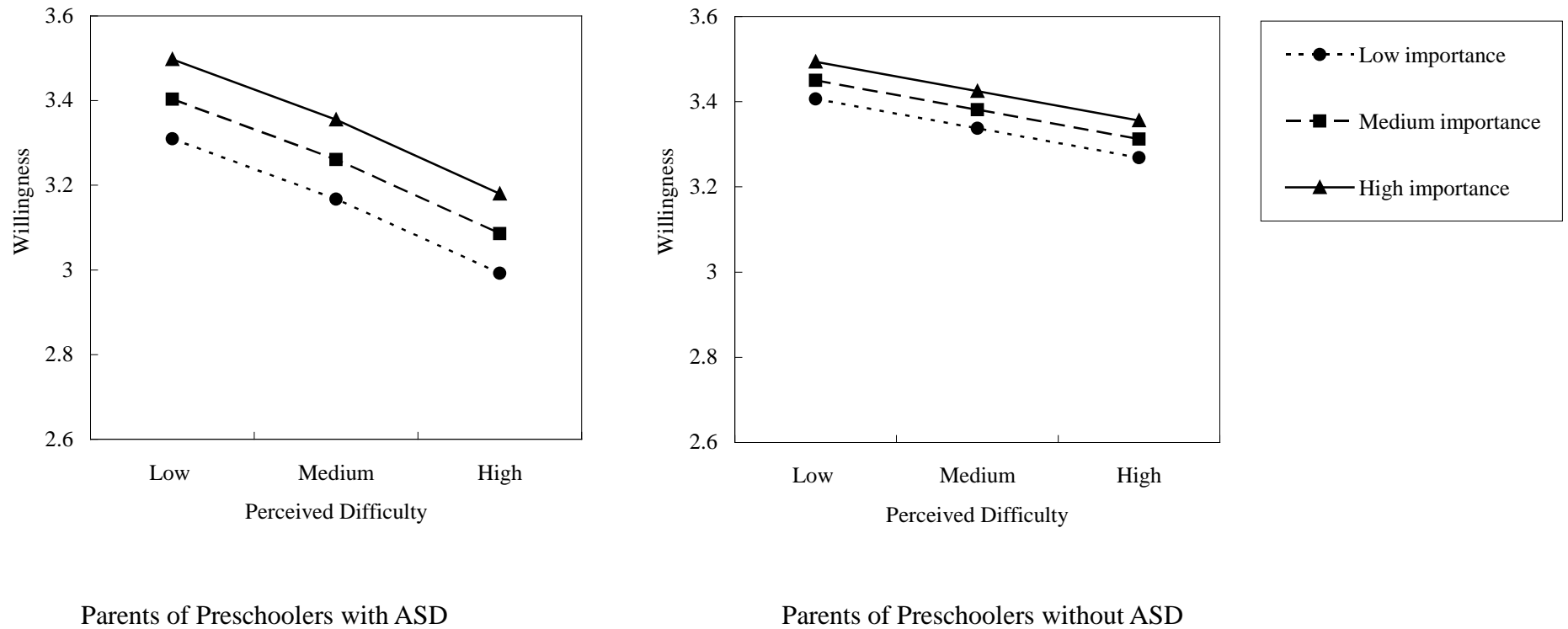
Correlations of the Variables

Variables	1	2	3	4	5	6
1. Willingness	--	.06	.39**	-.11	.07	-.14*
2. Frequency	.09	--	.04	-.06	.16*	-.16*
3. Positive Emotions	.39**	.16**	--	-.19**	.10	-.02
4. Negative Emotions	-.31**	-.09	-.39**	--	.09	.51**
5. Perceived Importance	.16**	.07	.15**	.13*	--	-.04
6. Perceived Difficulty	-.30**	-.09	-.37**	.44**	.03	--

Note. Correlation coefficients below the diagonal pertain to the parents of preschoolers with ASD whereas correlation coefficients above the diagonal pertain to the parents of preschoolers without ASD. \*  $p < .05$ , \*\*  $p < .01$ .



**Figure 1.** The relationships of perceived difficulty, emotions, and willingness in the participation of community activities among the two groups of parents. The path coefficients not in parentheses pertain to the analysis with positive emotions whereas the path coefficients in parentheses pertain to the analysis with negative emotions. \*  $p < .05$ , \*\*  $p < .01$ .



**Figure 2.** The relationship of perceived difficulty and willingness in the participation of community activities at different levels of perceived importance among the two groups of parents. The low level is 1 SD below the mean, the medium level is at the mean, and the high level is 1 SD above the mean.