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# Culture and Gender Differences in Children's Frequency of Participation in Preschool Daily Activities

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## Abstract

**Introduction.** Culture plays an important role in daily life, and is expressed in family and educational values and practices, as well as in gender expectations. Therefore, it has an important influence on children's development. This study examined the culture and gender differences in children's frequency of participation in preschool daily activities. **Methods.** We observed 120 preschool children (4.9–5.9 years) in their educational settings, using the Structured Preschool Participation Observation (SPO), focusing on play, learning and social participation. The preschool children were from two cultural groups: 80 ultra-orthodox Jewish and 40 Arab. The ultra-orthodox children attended gender separate educational programs, whereas the Arab children attended co-education programs. **Results.** Results showed a significant gender and culture interaction effect on play and social participation (Wilk's  $\Lambda = 0.49$ ,  $MF[3, 114]$ ,  $p < 0.001$ ,  $\eta^2_p = 0.51$ ): the ultra-orthodox girls scored significantly higher than ultra-orthodox boys, while among the Arab children no significant gender differences were noted. **Conclusion.** These findings suggest that culture may influence gender expectations, which in turn may affect children's frequency of participation in daily activities. Further studies are required to better understand the potential cultural needs among preschoolers. This may also assist in developing culturally sensitive assessments and appropriate programs that reflect the unique aspects of the diverse cultural settings and children's backgrounds.

## Introduction

Client-centered care is a key component of occupational therapy services that is intended to promote positive health outcomes, increase client satisfaction, and promote clients' participation in occupations (Jarvis, Gurga, Greif et al., 2019). Participation is defined as involvement in life situations, which represents the highest level of the functional hierarchy (AOTA, 2014; Rodger & Ziviani, 2006; World Health Organization [WHO], 2001). Because of its importance, participation has been identified as a key outcome for medical, rehabilitation, occupational therapy and educational interventions (Dijkers, 2010). Therefore, it is often evaluated using different scales (e.g., frequency, involvement, enjoyment; Anaby, Law, Feldman, & Majnemer, 2018). In this study we focused on frequency of participation in activities, which is one of the more common scales of participation. The bio-psychosocial model of the International Classification of Functioning, Disability and Health (ICF; WHO, 2001), as well as ecologically based models of human development (Bronfenbrenner, 1979), acknowledge the important contribution of contextual factors to individual participation in life situations and perceives the environment as a key factor influencing participation. In this study we focused on two contextual factors, culture and gender (WHO, 2001).

To the best of our knowledge, only few studies have examined the impact of these factors on children's participation (Anaby et al., 2014; King, Law, Hurley, Petrenchik, Schwellnus et al., 2010). Understanding the influence of cultural values and beliefs on children's participation in preschool, and specifically on the different genders, may promote occupational therapists' cultural sensitivity. Consequently, their ability to apply client-centered care may improve, thus enhancing their effectiveness in improving children's participation in daily activities.

## Literature Review

Bronfenbrenner's Ecology of Human Development theory (Bronfenbrenner, 1979) asserts that children's development occurs within the context of various environmental systems. The most proximal environmental system (the "microsystem") encompasses the relationships children have with their immediate surroundings, such as home and school environments. The most distant environmental system (the "macrosystem") is comprised of cultural aspects and laws. Culture is considered a complex and challenging concept. It can be defined as the customary beliefs, social forms and material of a racial, religious or a social group, which influence group behavior and are passed to succeeding generations (Wells, Black, & Gupta, 2016). Congruent with Bronfenbrenner's (1979)

theory, differences among cultural groups are often noted in the sequence and pace of children's development in various areas, such as motor skills (e.g., Venetsanou & Kambas, 2010) and play (Trawick-Smith, Wolff, Koschel, & Vallarelli, 2015). These differences may be attributed to the cultural influence on the types of toys, games and objects prominent in the children's daily life (Parker, Tewfik, & Burkhardt, 2002). The variability in children's development may also be related to the social-cultural values and ideologies that often influence educational practices and policies in general (Bronfenbrenner, 1979; Rodger & Ziviani, 2006), and specifically in relation to gender. Different cultures often define a range of behaviors, attitudes and roles that are generally considered acceptable, appropriate, or desirable for people based on their actual or perceived gender (Padilla, 2015). Certain behaviors are considered masculine or feminine. In certain cultures, these differences are subtle and implicit, whereas in other cultures (such as in specific religions) the expected roles and behaviors are explicit.

To prepare children for their expected gender roles, the educational curriculum often reflects these beliefs and expectations. In certain cultures, the expectations are explicit and directly influence the children's educational settings and curriculum. For example, there may be separate educational settings for boys and girls, each following

a different curriculum (Horowitz, 2012; Spigel, 2011). In other cultures, the different gender expectations are subtler. Boys and girls may be educated in the same setting using the same curriculum, yet the educational setting is embedded in a macrosystem, reflected by their parents, teachers and peers (Bronfenbrenner, 1979), which influences the expectations of boys and girls. These may be expressed in teachers' comments, ideas, suggestions for activities, etc.

Israel is an example of a situation where the macro - and microsystems are inter-related. It is a multicultural nation, with cultures defined by ethnic background and religious beliefs (Israel Central Bureau of Statistics [ICBS], 2015). This study focused on two cultural groups in Israel: ultra-orthodox Jews and Arabs. We selected these groups because both have distinct values and beliefs, especially relating to gender. The ultra-orthodox Jews account for 11-14% of the Israeli population (ICBS, 2015). They have distinct values and practices that influence all facets of life, as well as reflected in the educational system, including the structure and curriculum. They often live in secluded communities (specific cities or neighborhoods within a city) in order to preserve their distinct lifestyle, and emphasize strict rules of modesty and gender separation (Horowitz, 2012; Marcus, Josman, & Zlotnik, 2015; Spigel, 2011).

Similarly, the Arabs comprise approximately 20.7% of the Israeli population. The majority live in separate villages or cities (ICBS, 2015). Arab society also has traditional characteristics, reflected in their family relationship values. In addition, there are defined gender roles for males and females, and conservative lifestyle standards based on cultural norms (Nasser, 2013; Shapira, Arar, & Azaiza, 2011). In summary, both cultural groups have their own educational systems, in which the structure and curriculum reflect their unique cultural beliefs and values. The educational systems of these two cultural groups have both shared and distinct characteristics. In both systems, the teachers and children are part of the cultural community, sharing the same values and beliefs, in general, and specifically in relation to gender roles (Nasser, 2013; Shapira et al., 2011; Spigel, 2011).

However, within the ultra-orthodox group, boys and girls attend separate preschool settings that are different in their curriculum and daily schedule. Because men are expected to engage in religious studies throughout their lives (rather than salaried employment), most of the boys' curriculum focuses on religious studies (Negev & Garb, 2014; Spigel, 2011), learning to read religious texts and praying several times a day (IME, n.d.). Moreover, most of the play time is structured (e.g., games with rules or instructional games),

with only about 10% of the daily schedule dedicated to free play and social activities (Golos, Sarid, Weill, & Weintraub, 2011). By contrast, Jewish ultra-orthodox women are expected to be the homemakers or breadwinners (Tal, 2015). Thus, in the ultra-orthodox girls' preschools settings the curriculum content (i.e., learning, play and social activities) and time allotments resemble those of most preschools in Israel, including the Arab settings. The learning and content may include literacy and math along with an emphasis on religious subjects and rituals. In addition, time is allotted to creative activities (e.g., drawing, pasting, coloring). However, similar to the ultra-orthodox boys' settings, the activities are more structured, with relatively little time (approximately 25%) allotted for free play or activity choice (Horowitz, 2012; IME, n.d.).

Unlike the ultra-orthodox Jews, the Arab preschool educational settings are coeducational. The daily schedule offers various opportunities (at least 50% of the time) for the children to choose their play, learning and social activities (described above), such as social play, construction, creative activities or table games; yet there are specified times (approximately 1 hour a day) for structured learning (IME, 2010). Thus, whereas the settings of these two cultures are similar in the performance areas (learning, play, and social participation), they differ in the

amount of choice and types of learning activities provided to the children.

Several studies found differences in children's participation among various cultural groups in Israel. For example, Engel-Yeger (2013) compared patterns of participation in leisure activities among 111 Israeli Jewish and 134 Arab children between the ages of 6-11, and revealed that the Arab children had significantly higher participation scores in informal and recreational after-school activities. Another study compared 30 Jewish and 30 Druze children aged 8-10. Results showed that the Jewish children displayed significantly higher levels of participation and enjoyment in leisure activities compared to the Druze children, with higher diversity in leisure activities among the Jewish girls as compared to the Druze girls. No difference was found between the Druze boys and girls (Engel-Yeger, Jarus, & Law, 2007).

While these studies are informative, they focused on elementary school rather than on preschool children. In addition, the data in these studies were gathered mostly from parents' questionnaires rather than through direct observation of children's participation in their educational settings. One study that did directly observe secular Jewish preschool children's participation (30 boys and 48 girls) reported that the preschool girls participated more than the

boys in daily activities (Sharfi, 2008). Yet, this study was performed within one culture (i.e., secular Jews). Direct observations of children in their preschool activities by occupational therapists may add an important point of view (King et al., 2014) that complements the teachers' or parents' perception of children's participation.

The purpose of our study was to examine the impact of culture and gender on preschool children's frequency of participation in daily activities in the educational settings. We focused on two cultural groups in Israel (ultra-orthodox Jews and Arabs). We hypothesized that because the preschool routine of the ultra-orthodox group is more structured, children in this group will participate more in the preschool activities compared to the Arab group. We also postulated that the ultra-orthodox boys will have higher learning-participation scores compared to the girls, because their curriculum stresses the importance of learning for boys. However, based on previous studies (e.g., Engel-Yeger et al., 2007; Sharfi, 2008), we expected to find overall higher participation scores among the girls than the boys.

## Methods

### Study Design and Participants

Using a group-comparison design, we studied 120 preschool children (age range

= 4.9 – 5.9 years) from two cultural groups in Israel. The first consisted of 80 ultra-orthodox Jewish children: 39 (48.7%) boys (Mean age = 65.1 months, SD = 3.2) and 41 girls (Mean age = 65.1 months, SD = 5.3), studying in separate educational settings. The second included 40 Arab children, Christian and Muslim children from religious, traditional and secular families, of whom 20 (50%) were boys (Mean age = 67.7 months, SD = 3.4) and 20 were girls (Mean age 65.5 months, SD = 2.8), from two co-educational settings. We selected the educational settings through a convenience sample. The two cities where the educational settings were located were of similar size and socio-economic index ranking (ICBS, 2015). The parents of all children in the four educational settings consented to their participation, with the exception of one child.

## Instrument

The Structured Preschool Participation Observation (SPO; Golos & Weintraub, 2020) was developed for occupational therapists to assess children's participation in daily activities in preschool settings. The SPO is grounded in the bio-psychosocial model (ICF; WHO, 2001). It includes 20 items representing activities in three occupational areas relevant to children's participation in the educational setting: (a) 8 Play items (e.g., playground activities, playing with small objects, games with

rules); (b) 7 Learning items (e.g., participation in arts and crafts activities, participation in storytelling time), and (c) 5 Social Participation (e.g., engaging in activity with at least one other child, interacting with adults). Each item is evaluated by frequency of participation using a 5-point Likert scale (1 = never participates; 5 = always participates). A separate mean score is calculated for each area.

In order to increase reliability, a protocol was developed for administering the SPO. Congruent with this protocol, each child was observed by an occupational therapist in various activities for a period of 1.5 hour per session, twice a week, for a period of 2 weeks, usually at different times of the day. Additionally, a 4-hour training program is required prior to administering the SPO, which includes both theory (i.e., ecological models and definition of participation) and practice. The practice encompasses viewing three movies and scoring using the SPO, as well as administering the SPO to two children in their educational settings, followed by a 2-hour discussion. The SPO was found to be valid and reliable; high internal consistency for each occupational area; Cronbach's alpha ranging from 0.737 to 0.962, and significant and moderate to high inter-rater reliability coefficient; ranging from 0.596 to 0.808;  $p < 0.05$ .

## Procedure

After obtaining approval from the University Ethics Committee, as well as from the Ministry of Education for the Arab group, the directors of the educational settings were approached and parents were asked to sign a consent form based on a letter they received describing study objectives and procedure. Next, four pediatric occupational therapists with at least 5 years of experience were trained by the first author to administer the SPO according to the protocol (as described in the Instruments section). Each of the four therapists observed 30 children in their educational settings.

## Data analysis

Data analyses were performed using the Statistical Package for the Social Sciences (SPSS-Version 24). Descriptive statistics, including means, standard deviation, median and frequencies, were calculated for demographic variables and the SPO data. A 2 (genders) X 2 (cultural groups) multivariate analysis of variance (MANOVA) was performed, with the three areas as dependent variables. Univariate tests examined the variance between variables in each occupational area (significance level  $p = 0.05$ ). Partial eta squares (Partial  $\eta^2$ ) were used to determine overall effect sizes (effect size indices for Partial  $\eta^2$  were: small = 0.01

to 0.05, medium = 0.06 to 0.13, and large  $\geq 0.14$ ) (Stevens, 2002). One-way analysis of variance (ANOVA) tests were also used to examine differences between genders within each cultural group, as well as differences between cultural groups for each gender.

## Results

First, we examined culture and gender differences in children's frequency of participation using MANOVA. Results indicated overall significant gender and culture effects, both showing a large effect size (Wilk's  $A = 0.58$ , MF [3,114],  $p < 0.001$ ,  $n_p^2 = 0.43$ ; Wilk's  $A = 0.38$ , MF [3, 114],  $p < 0.001$ ,  $n_p^2 = 0.62$ , respectively). The interaction effect between gender and culture was also significant, with a large effect size (Wilk's  $A = 0.49$ , MF [3, 114],  $p < 0.001$ ,  $n_p^2 = 0.51$ ). Separate univariate tests were performed for each area. As can be seen in Table 1, the results showed overall significantly higher frequency of participation scores for girls than for boys, with large effect sizes in all areas. We also found significantly higher participation among the ultra-orthodox Jewish group compared to the Arab group in all occupational areas, with large effect sizes for Play and Learning and a medium effect size for the Social area.

Descriptive statistics (Mean and standard deviations) of boys' and girls' frequency



Table 1

Means, standard deviations and univariate analysis of frequency of participation scores by culture group and gender

	Culture				Gender			
	UO <sup>1</sup>	Arab	$F(1,116)$	$\eta_p^2$	Boys	Girls	$F(1,116)$	$\eta_p^2$
	$n = 80$	$n = 40$			$n = 36$	$n = 61$		
Occupational Areas	M (SD)	M (SD)			M (SD)	M (SD)		
Play	4.30 (0.65)	3.33 (0.46)	164.59***	.59	3.62 (0.41)	4.33 (0.84)	41.04***	.26
Learning	4.16 (0.70)	3.55 (0.74)	33.47***	.41	3.48 (0.72)	4.42 (0.48)	81.52***	.41
Social	4.20 (0.83)	3.90 (0.55)	7.03**	.06	3.67 (0.60)	4.52 (0.66)	37.26***	.24

Notes. 1. UO – Ultra-orthodox;  $p < 0.01$ \*\*,  $p < 0.001$ \*\*\*;  $\eta_p^2$  = Partial Eta

of participation within each cultural group are presented in Figure 1. As can be seen, the girls in the ultra-orthodox group scored highest in all areas of occupation, while the Arab boys scored lowest in the Learning area. In addition, the differences between boys and girls are apparent in the ultra-orthodox group in all occupational areas, while in the Arab group these differences are apparent only in the Learning area.

In examining gender and culture interaction effects, we found significant interaction effects for Play ( $F = 4.70_{(1,116)}$ ,  $p < 0.001$ ,  $n_p^2 = 0.39$ ) and Social Participation ( $F = 25.96_{(1,116)}$ ,  $p = 0.009$ ,  $n_p^2 = 0.18$ ), both showing large effect sizes. However, no significant interaction effect was found for Learning. For the purpose of comparing

genders within each cultural group, one-way ANOVA tests were performed for each area of occupation. As can be seen in Table 2, the ultra-orthodox girls scored significantly higher ( $p < 0.001$ ) than the ultra-orthodox boys in all areas, with large effect sizes, while the Arab girls participated significantly more than the Arab boys only in Learning, with a large effect size ( $p < 0.001$ ). We also performed one-way ANOVA to compare cultural groups within each gender, in each area of occupation. As can be seen in Table 3, the ultra-orthodox boys scored significantly higher ( $p < 0.01$ ) than the Arab boys in Play, with a medium effect size, and in Learning, with a large effect size – but not in Social Participation; while the ultra-orthodox girls participated significantly



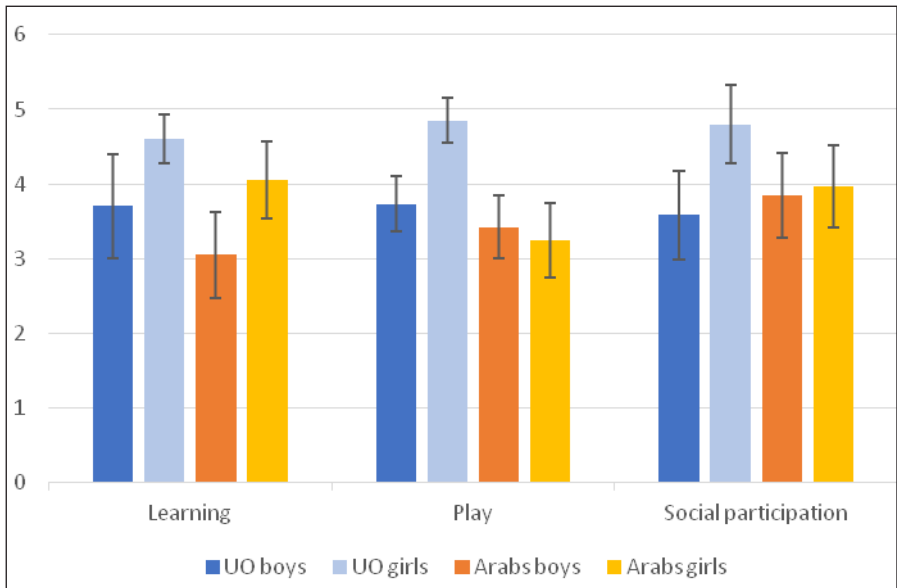


Figure 1. Means and standard deviations of boys' and girls' frequency of participation scores in each occupational area

more ( $p < 0.001$ ) than Arab girls in all areas, with large effect sizes.

## Discussion

This study examined the differences in frequency of participation in preschool daily activities among children from different cultures and genders. The study's rationale was grounded in Bronfenbrenner's Ecology of Human Development theory (Bronfenbrenner, 1979), which asserts that children's development is influenced by both distal environmental factors, including culture (the "macrosystem") and proximal factors such as the family and educational

setting (the "microsystem"). This study focused on two cultural groups in Israel (Arabs and ultra-orthodox Jews) that have both similar and different attributes. Both groups live in secluded cities (ICBS, 2015; Marcus et al., 2015), and have their own educational systems. However, unlike the ultra-orthodox Jews, who have separate educational systems, curricula and schedules for boys and girls (IMD, n.d.; Spigel, 2011), the Arab boys and girls attend preschools together and follow the same curricula and schedules. Therefore, we hypothesized that the children's frequency of participation in these two cultural groups and genders may differ.

Table 2

*Comparison of children's frequency of participation scores by gender in each group<sup>1</sup>*

	UO <sup>2</sup> group		Arab group	
	<i>F</i> (1,80)	$\eta_p^2$	<i>F</i> (1,40)	$\eta_p^2$
<b>Occupational Areas</b>				
<b>Play</b>	217.71***	.74	1.29	.03
<b>Learning</b>	55.29***	.42	33.17***	.47
<b>Social</b>	93.37***	.55	.39	.01

Notes. 1. Results are based on a univariate analysis; 2. UO – Ultra-orthodox;

$p < 0.01^{**}$ ,  $p < 0.001^{***}$ ;  $\eta_p^2$  = Partial Eta

Table 3

*Comparison of children's frequency of participation scores by cultural group in each gender<sup>1</sup>*

	Boys		Girls	
	<i>F</i> (1,59)	$\eta_p^2$	<i>F</i> (1,61)	$\eta_p^2$
<b>Occupational Areas</b>				
<b>Play</b>	8.52**	.13	237.06***	.80
<b>Learning</b>	13.40***	.19	25.36***	.30
<b>Social</b>	2.69	.05	33.53***	.36

Notes. 1. Results are based on a univariate analysis;  $p < 0.01^{**}$ ,  $p < 0.001^{***}$ ;  $\eta_p^2$  = Partial Eta

The results, which showed that girls generally participated more frequently than boys in Play, Learning and Social activities, coincide with the findings by Sharfi (2008) showing that in preschool activities girls participated more than boys. Our results also indicated a cultural effect on children's frequency of participation in preschool activities, while the ultra-

orthodox children participated more than the Arab children in the three areas. These results support previous studies showing that environmental factors may directly impact children's participation in different settings (Anaby et al., 2013; Rodger & Ziviani, 2006). Likewise, our results confirm previous studies (Engel-Yeger, 2013; Engel-Yeger et al., 2007) indicating

that children from different cultural groups (such as Muslim Arabs and Jews) varied in their participation in daily activities. In this study, it is not possible to distinguish between the cultural influence of the educational and home settings. However, since the educational staff were from the same cultural background as the families, one may postulate that the children's frequency of participation was influenced by both the macro- and micro-systems.

Our results further indicated significant culture and gender interaction effects in preschool play and social participation. In these areas the ultra-orthodox girls scored significantly higher than the ultra-orthodox boys, while in the Arab group, no significant gender differences were noted. Previous studies found gender and ethnic differences among preschool children related to playing with toys (Trawick-Smith et al., 2015), as well as gender differences related to social play (Mirandaa, Larreaa, Muelab, & Barandiarana, 2017). However, we could not find other studies examining the interaction effects of culture and gender in preschool children. Yet these results appear to support the belief that social-cultural values may influence educational practices and policies (Bronfenbrenner, 1979; Rodger & Ziviani, 2006), and in turn, children's preschool participation.

Given the fact that both groups in this study are considered traditional (Marcus

et al., 2015; Nasser, 2013), with distinct beliefs and values relating to gender roles, it is not easy to explain these results, and specifically the interaction effect. It appears that explicit versus implicit gender roles in the different cultures may have had an impact on the children's frequency of participation, namely, the separate educational settings and curriculum among the ultra-orthodox Jews versus the Arab co-gender setting. Although this factor may explain the interaction effect, it fails to account for the higher frequency of participation in activities in the ultra-orthodox group compared to the Arab group. A possible explanation is the higher structure in the ultra-orthodox educational preschool setting (Marcus et al., 2015; Negev & Garb, 2014; Spigel, 2011), which allows fewer opportunities for individual choice and less diversity in the activities offered. Therefore, the children are expected to participate in the different activities provided by the teachers. The fact that no interaction effect between culture and gender was found in preschool learning activities may reflect the general difference noted in the two genders, and not necessarily a cultural effect.

Another interesting finding, which is contrary to our expectations, is that ultra-orthodox girls participated more in Learning activities than did the ultra-orthodox boys. This is somewhat surprising because the focus of the curriculum in the

preschools of the ultra-orthodox boys is religious studies (Negev & Garb, 2014). A possible explanation may lie in the specific items that comprise the area of Learning in the SPO, including arts and crafts, paper-pencil and cutting activities. The activities entail fine-motor and grapho-motor skills in which girls have been found to outperform boys (Vlachos, Papadimitriou, & Bonoti, 2014). On the other hand, the learning activities of the ultra-orthodox boys focused on learning to read, and listening to religious stories. This implies that the SPO may not sufficiently reflect the major learning activities in ultra-orthodox boys' preschools, which are unique and cultural-specific.

Finally, given the different gender roles within the Arab culture, it is not clear why we did not find overall significant gender differences between the boys and girls in play and social participation. A possible explanation is that at the preschool stage, the different gender expectations embodied in the Arab culture (Nasser, 2013; Shapira et al., 2011) are more implicit, as reflected in the co-gender settings and curriculum. Consequently, boys and girls could choose the activities in which they wanted to participate, without regard to pronounced gender differences.

## **Limitations and future studies**

In interpreting these findings, several limitations should be recognized. First, because there are very few studies examining the interaction effect of culture and gender among preschool children, it is premature to conclude that this study's findings may be generalized to different cultures. Therefore, it is advisable to replicate the study in other cultural groups, and to adjust the activities to the specific culture (e.g., the common learning or play activities in those specific settings). Moreover, this study observed two specific cultural groups that are traditional but differ in their levels of religiosity, and also included Arab children as one ethnic group. Therefore, future studies should investigate the impact of cultural versus religious expectations, as well as including different sub-cultural groups. Second, in this study we focused on frequency of participation, therefore future studies should also include additional aspects of participation, such as level of involvement or enjoyment, as well as other aspects of performance. It is also recommended to collect additional family data (such as parental education and income), and to examine the joint and separate influences of the family versus the educational setting on children's participation in preschool. These issues may be addressed through both quantitative method, as well as qualitative methods (e.g., interviewing

parents and/or educational staff) in order to better understand the impact of values and beliefs on participation.

## Conclusions

This preliminary study attempted to describe a phenomenon, focusing on the culture and gender differences in children's frequency of participation in preschool daily activities. Further studies are required to examine these differences in relation to values and beliefs of these cultures, including comparison to other cultural groups, as well as examining additional aspects of children's participation and performance. The results showed both cultural and gender differences indicate that cultural perceptions may guide educational practices and influence children's frequency of participation in daily activities. This may be especially true in cultures that have their own educational settings for children from a homogeneous cultural background. The results of this study also contribute to our understanding of potential cultural needs among preschoolers. This understanding may also assist educators and occupational therapists in better understanding the need to be more culturally sensitive. It is hoped that this will assist professionals to better be able to adapt educational and intervention programs to the children's cultural background, such as developing specific separate or co-educational programs. It can

also aid in developing cultural sensitive assessments and appropriate interventions in diverse cultural settings, and thus reinforce client-centered care.

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