

Childhood participation in after-school activities: what is to be expected?

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Key words:

Participation, developmental stages, gender.

Participation is recognised as a key to health and wellbeing and is considered to be a vital part of the development of children and youth. The purpose of this study was to examine the participation patterns of children and adolescents in their time outside formal school. More specifically, the influence of age and gender on after-school participation patterns was explored.

Method: Three hundred and thirty-two children and adolescents (5 to 18 years old) were divided into five age groups and completed the *Children's Assessment of Participation and Enjoyment (CAPE)*. To test the interaction effect of gender and age on participation measures, ANOVAs were conducted.

Results: The results indicated differences with moderate to high effect size in participation patterns across age, where a decline in participation was detected as children made the transition to adolescence. Differences with negligible effect size in participation were found between boys and girls in some of the activity types. No interaction effect between age and gender was observed.

Conclusion: Participation patterns change with age, particularly as children make the transition to adolescence; however, this change does not depend on gender. Intervention strategies might take into account these inherent changes. Future studies might consider additional factors (for example, environment) while examining participation throughout age.

Introduction

Participation is recognised by the World Health Organisation (WHO) (2001) as one of the central domains in the International Classification of Functioning, Disability and Health (ICF). Similarly, one of occupational therapy's targeted outcomes, identified by the American Occupational Therapy Association (AOTA 2008), is to enhance engagement in occupation in order to enable clients' participation in desired roles and life situations at home and in the community. Participation, which is believed to be linked to health and wellbeing, is considered vital for children with and without disabilities (Larson and Verma 1999, King et al 2003). Participation leads to competence and is essential for psychological, emotional and skill development (Larson and Verma 1999, Larson 2000, Forsyth and Jarvis 2002). In particular, participation in non-school activities, such as play and interaction with family members and friends, is recognised as the most important context of learning and thriving (Larson and Verma 1999).

If the aim as therapists in general and occupational therapists in particular is to enhance clients' participation, and hence their health and wellbeing, the exploration might begin by understanding the nature of participation among typically developed children. This information is particularly important in the case of children because their participation pattern naturally changes while moving through developmental stages or transitions (Edward and Christiansen 2005). Through this, therapists would know what to expect, in terms of patterns of participation, in each developmental stage and between the genders. This study aims to contribute to this growing body of knowledge.

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Participation

The WHO (2001), in the ICF, defines participation as involvement in life situations, which occurs across many locations, including environments of work, school, play, sport, entertainment, learning, civic life and religious practice. This definition is broad because it includes children's participation in school environments as well as in more voluntary, extracurricular activities, such as recreation and leisure. Psychologies specialising in childhood development recognise that *non-school* activities, such as play and interaction with family members and friends, may be among the most important contexts of learning and positive development (Larson and Verma 1999, Larson 2000). In fact, participating in discretionary activities that meet the child's preference and needs provides a context for developing skills and competencies, shaping self-identity, achieving mental and physical health (Desha and Ziviani 2007), expressing creativity and determining meaning and purpose in life (Larson 2000).

Thus, this study embraces the approach of King et al (2003) to children's participation, where the focus is on recreational and leisure formal and informal activities outside school. These include activities such as artistic, creative, cultural, active physical, sports, play, social, skill-based and work activities (King et al 2003). Formal activities are typically more structured, have rules and organisation, involve leaders and often require preplanning, such as music or art lessons, organised sports or youth groups. In contrast, informal activities, such as reading, talking on the phone or doing a puzzle, are typically more spontaneous, occur with less planning and have only a few rules (Sloper et al 1990).

Participation among children and adolescents

For children, participation in day-to-day formal and informal activities is vital. There is a wide recognition of the importance of involvement in activity and its positive influence on the development of skills and competencies, social relationships, and long-term mental and physical health (Larson and Verma 1999, Simeonsson et al 2001, Forsyth and Jarvis 2002). Although developmental theories do not address participation specifically, they do provide knowledge for understanding activities (Edward and Christiansen 2005). For example, Havighurst's (1972) life span developmental theory, termed as the developmental tasks theory, seems to be relevant to the study of participation pattern. According to his theory, life span is divided into developmental stages, based on task achievements that meet social expectations and result in role acquisition. Three developmental stages suggested by Havighurst (1972) are relevant to this study's population:

1. *Early childhood* resides from birth to 6 years, where the individual is involved cognitively with language, physical reality and forming concepts, and begins to develop a conscience

2. *Middle childhood* refers to ages 6 to 12 years, where the individual learns physical skills to achieve competence in play and in learning to get along with peers
3. *Adolescence* stage continues from age 12 to 18 years, where the individual begins to learn social and gender roles and develops mature relationships with peers and emotional independence from parents.

Studies show that the participation pattern changes across age, especially as children move to adolescence. For example, Henry (1998) found that adolescents tend to participate in more informal activities, such as listening to music, hanging out with friends, watching television and talking on the phone. Similarly, in a report published by the Canadian Council on Social Development (2001), it was revealed that younger children participate more in organised activities; as these children become adolescents, participation in organised activities decreases.

Another factor that might affect the participation patterns of children and adolescents is gender. Studies investigating youth participation found that girls are less physically active (Higgins et al 2003) and tend to be engaged in skill-based, self-improvement activities (Garton and Pratt 1991). Similar findings were reported by Posner and Vandell (1999) among children aged 8 to 10 years. Girls were more likely to engage in academic activities and socialising, whereas boys were more likely to play coached sports.

Although the aforementioned studies provide some information on children's participation patterns, this knowledge is not inclusive enough. Not only did these studies focus at specific developmental stages, mainly adolescence, but they also explored specific activities (for example, sports, productive activities and passive leisure). Moreover, the measures that were used in these studies, which were mostly based on a time-use survey, did not address the subjective experience that the child or adolescent derives from engaging in activities (Law 2002). This aspect of participation, which is portrayed, for instance, in level of enjoyment, is crucial, in particular when trying to enhance children's wellbeing.

The *Children's Assessment of Participation and Enjoyment* (CAPE) (King et al 2004), a comprehensive and valid measurement, is able to capture participation in this broader perspective (including diversity, intensity, with whom and where the activity occurs, and level of enjoyment). Hence, using the CAPE to study participation might address the identified gaps in current knowledge.

Finally, studies have examined the effect of age and gender on participation separately. In order better to understand the nature of participation, there is a need to examine the interaction effect of age and gender on participation, that is, whether the changes in participation pattern across the developmental stages are dependent on gender.

Given all this, it seems that there is a need to study participation in a broader sense. Thus, this study explored the effects of age and gender on participation in after-school activities (in terms of diversity, intensity and enjoyment) of children and adolescents.

Method

Participants

This study had a convenience sample of 332 Israeli children and youth (52% were girls), with no disability, ranging between the ages of 5 and 18 years (mean = 8.8, SD = 3.5). Participants were recruited from two main middle-class urban centres from the north and central parts of Israel. Areas were determined as middle-class localities based on charts of the Central Bureau of Statistics (2006), which map Israeli household income by district, subdistrict and population group. The data were collected by occupational therapy students at Tel-Aviv University as part of their course assignments.

The participants were divided into five age groups based on the developmental stages suggested by Havighurst (1972), while considering the natural transition points typical to the Israeli education system. The first two groups were from the *early childhood* developmental stage: (1) kindergarten children (5 years, n = 70, 50% girls) and (2) first-grade children (6 years, n = 79, 48% girls). The next two groups were from the *middle childhood* developmental stage: (3) children attending the younger division in elementary school (7-8 years, n = 43, 72% girls) and (4) children attending the older division in elementary school (9-11 years, n = 70, 46% girls). The last group was from the *adolescence* developmental stage and comprised secondary school adolescents (age 12-18 years, n = 70, 54% girls).

Instruments

Participation was assessed using the initial research version of the *Children's Assessment of Participation and Enjoyment* (CAPE) (King et al 2004), a measure designed to document how children or youth participate in everyday activities outside mandated school activities. The CAPE, designed for use with children or youth aged 5 years to 21 years, has 49 activities in total, divided into five activity categories or types: recreational (12 items), active physical (9), social (9), skill-based (9) and self-improvement activities (10). Three additional activity types are generated from the CAPE's items: formal (14) and informal (35) activities, as well as total activities (49). Thus, the CAPE provides information regarding eight activity categories or types.

The children indicated (a) what activities they participated in, (b) how often they had done the activities in the past 4 months and (c) how much they enjoyed doing the activity. Each activity was presented to the child or adolescent on a card, with a drawing of the activity and a phrase (in words) describing the activity. After each section of the

Table 1. Example of the scales and items of the CAPE (King et al 2004)

	Diversity Have you done this activity in the past 4 months?	Intensity If yes, how often?	Enjoyment How much do you enjoy doing this activity?
Recreational activities			
Playing board or card games	Yes/No	1 = Once/4 months 2 = Twice/4 months 3 = Once/month 4 = 2-3 times/month 5 = Once/week 6 = 2-3 times/week 7 = Once/day	1 = Not at all 2 = Somewhat 3 = Pretty much 4 = Very much 5 = Love it
Doing puzzles	Yes/No	1 2 3 4 5 6 7	1 2 3 4 5
Playing computer or video games	Yes/No	1 2 3 4 5 6 7	1 2 3 4 5
Going for a walk or hike	Yes/No	1 2 3 4 5 6 7	1 2 3 4 5

CAPE, the child was given the opportunity to add other activities that were not included in the CAPE if needed.

Three types of score were generated from the CAPE measure and used in this study:

1. *Diversity* (a count of the number of activities in which the child has participated over the past 4 months)
2. *Intensity* (rated on a 7-point scale and calculated by dividing the sum of item frequency by the number of possible activities in each activity category)
3. *Enjoyment*, mean score (rated on a 5-point scale, higher scores reflect greater enjoyment).

Diversity, intensity and enjoyment are calculated for the eight activity types (that is, the total, informal, formal, recreational, active physical, social, skill-based and self-improvement activities). Overall, 24 scores were calculated (for further details of CAPE's scales see Table 1).

The construct validity of the CAPE is supported by its ability to discriminate between boys and girls, and between children in various age groups (King et al 2007). Test-retest reliability for the formal, informal and total participation intensity score of the CAPE ranged from 0.64 to 0.86 respectively (based on random effects intraclass correlation coefficients), when assessed with 48 children/adolescents with disabilities (King et al 2004). Additional psychometric properties of the CAPE are summarised in Imms's (2008) review. The CAPE utility in the Israeli context was demonstrated when all its items were found relevant, representative and comprehensive to children and youth living in Israel (Engel-Yeger et al 2007, 2009). Moreover, no additional types of activity that were not already mentioned in the CAPE were identified by the children.

Procedure

Ethical approval was provided by the Behavioural Research Ethics Board of Tel Aviv University. Information about the study was provided to, and written consent obtained from,

all children and parent. Data were collected by trained occupational therapy students. A Hebrew version of the CAPE was developed through the translation and back-translation method (Chapman and Carter 1979). Following Bracken's and Barona's (1991) recommendations, the CAPE was translated into Hebrew by a Hebrew native speaker who was fluent in English and translated back into English by a different native English speaker who was also fluent in Hebrew. The new English version was compared with the original version. When all the items of the reverse English translation were identical to the original version, the Hebrew items satisfied the criteria. The picture of one item, participation in religious activities, was modified in order to represent all three religious groups practising in Israel.

The participants completed the CAPE during a meeting with the interviewers. In this study, the CAPE was administered in one phase. For younger children, their parents also assisted in completing the CAPE, except for the enjoyment part which was answered by the children themselves.

Data analysis

Descriptive statistics (mean, SD and percentage) were performed for all CAPE scores to specify the overall participation pattern of the sample.

In order to analyse the gender differences, and age groups, two-way ANOVAs were performed on each of the CAPE scores: 2 (gender group) × 5 (age group) design. Post-hoc tests were performed following significant ANOVA tests using Scheffe procedure to test for significant differences between the means. The Scheffe method was selected to protect against alpha inflation error. In addition, the level of significance was set at 0.01 for all statistical tests in order to limit the possibility of type I error. Finally, in order to test for practical significance effect size (ES), the omega square (ω^2) was calculated, based on the following formula: $\omega^2 = \frac{SS_b - (df_b * MS_w)}{(MS_w + SS_t)}$. These values were interpreted according to Kirk's classification (1996), where $\omega^2 = 0.01$ is considered as a small, $\omega^2 = 0.059$ as a medium and $\omega^2 = 0.138$ as a large effect size.

The dependent measures were diversity, intensity and enjoyment in the entire eight CAPE activity types: recreational activities, active physical, skill-based, social, self-improvement, formal, informal and total activities. Overall there were 24 dependent scores.

Results

In order to analyse the gender and age differences, two-way ANOVAs were performed on each of the CAPE scores: 2 (gender group) × 5 (age group) design. A significant main effect for age groups was found for all scores, except for the participation intensity in the skill-based activities (see Table 2 for results). Collapsed over the intensity scores (see Fig. 1), there is a trend for greater participation intensity

Table 2. Differences in gender and age groups across CAPE's scores (n = 332)

	Gender		Age group	
	F(df)	ω^2	F(df)	ω^2
Recreational activities				
Diversity	0.74 (1, 322)	<0.001	31.22** (4, 322)	0.27
Intensity	0.98 (1, 322)	<0.001	27.8** (4, 322)	0.28
Enjoyment	0.01 (1, 322)	<0.001	12.6** (4, 322)	0.18
Active physical				
Diversity	8.12* (1, 322)	0.02	10.9** (4, 322)	0.11
Intensity	12.1* (1, 242)	0.04	6.3** (4, 322)	0.07
Enjoyment	0.04 (1, 322)	<0.001	14.2** (4, 242)	0.2
Social activities				
Diversity	0.05 (1, 322)	<0.001	7.3** (4, 322)	0.07
Intensity	5.3 (1, 322)	0.02	11.7** (4, 322)	0.13
Enjoyment	9.4* (1, 246)	0.04	7.8** (4, 246)	0.11
Skill-based activities				
Diversity	8.4* (1, 322)	0.02	4.1* (4, 322)	0.04
Intensity	29.9** (1, 322)	0.1	2.2 (4, 322)	0.02
Enjoyment	7.6* (1, 322)	0.03	9.4** (4, 322)	0.14
Self-improvement activities				
Diversity	0.03 (1, 322)	<0.001	4.4* (4, 322)	0.04
Intensity	4.4 (1, 322)	0.01	25.2** (4, 322)	0.26
Enjoyment	4.4 (1, 322)	0.02	21.7** (4, 322)	0.28
Formal activities				
Diversity	0.71 (1, 322)	<0.001	3.7* (4, 322)	0.03
Intensity	0.01 (1, 322)	<0.001	11.8** (4, 322)	0.13
Enjoyment	0.2 (1, 322)	<0.001	13.3** (4, 322)	0.19
Informal activities				
Diversity	0.01 (1, 322)	<0.001	15.4** (4, 322)	0.15
Intensity	8.3* (1, 322)	0.03	6.4** (4, 322)	0.07
Enjoyment	5.4 (1, 322)	0.02	19.9** (4, 322)	0.26
Total participation				
Diversity	0.51 (1, 322)	<0.001	11.9** (4, 322)	0.12
Intensity	5.5 (1, 322)	0.02	7.9** (4, 322)	0.09
Enjoyment	4.5 (1, 322)	0.02	21.8** (4, 322)	0.28

*p<0.01, **p<0.001. ω^2 = omega square to represent effect size.

from ages 5 to 11 years, followed by a decrease in the 12-18 years age range in all activity types except for social activities and self-improvement activities. In fact, in the social and the self-improvement activities, participants in the youth group (12-18 years) had significantly greater participation intensity than the youngest groups (5 and 6 years old). Post-hoc analysis indicated that the 9 to 11 years old children had significantly greater participation intensity than the children from the 5-year-old group in all the CAPE activity types except for the skill-based activities. In addition, the 9-11 years group showed greater intensity than the adolescents group in recreational, physical, informal and total activities.

A similar decline was observed as children move to adolescence in participation *diversity* (see Fig. 2). Post-hoc analysis indicated that the 9 to 11 years old children had significantly greater participation diversity across all CAPE activity types (with the exception of self-improvement score) than the youth/adolescents' group. Based on Kirk's (1996) classification, effect size values were moderate to high, indicating that 7% to 28% of variance of most of CAPE scores (intensity) was explained by age (see Table 2).

As for the enjoyment scale, the youths' level of enjoyment was significantly lower than the rest of the age groups in all CAPE activity types (see Fig. 3) with relatively higher levels of effect size (11% to 28%).

A significant main effect for gender was found in the diversity and intensity scores for physical and skill-based activities and in the intensity score for informal activities (see Table 1 for results). Those results indicated that the girls had significantly greater participation diversity and intensity than boys in the skill-based activity scale and greater participation intensity in informal activities. On the other hand, in physical activities the boys had significantly greater participation diversity and intensity compared with the girls. However, the effect sizes of the significant differences between the genders were low to negligible (see Table 2 for ω^2 values), with the exception of skill-based activities (10%). The difference in the enjoyment score was significant in the social activities and skill-based activities, where the girls' level of enjoyment was higher than that of the boys yet effect size values were low.

Finally, in order to compare the participation of boys and girls from different age groups, the interaction effect between gender and age on participation was examined. The results of the analysis of variance indicated that the interaction effect between age and gender was not significant for all three scales across all CAPE activity types.

Fig. 1. Differences in Intensity scores between age groups.

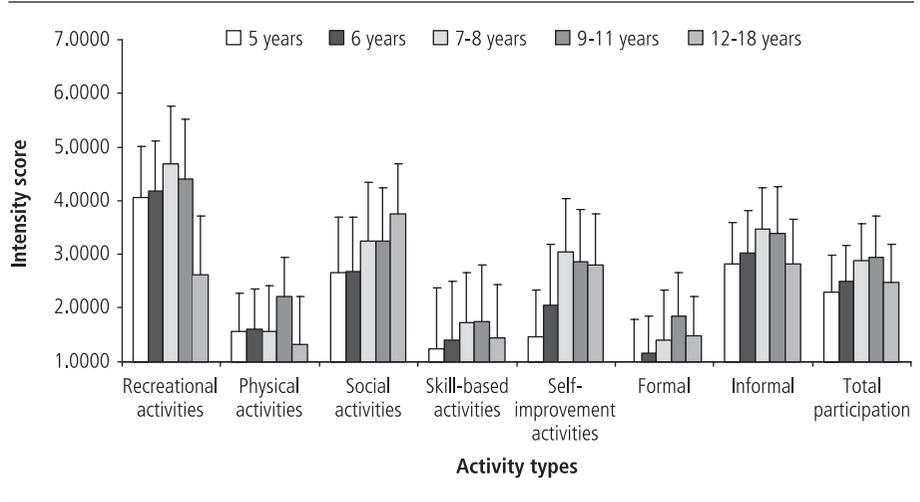
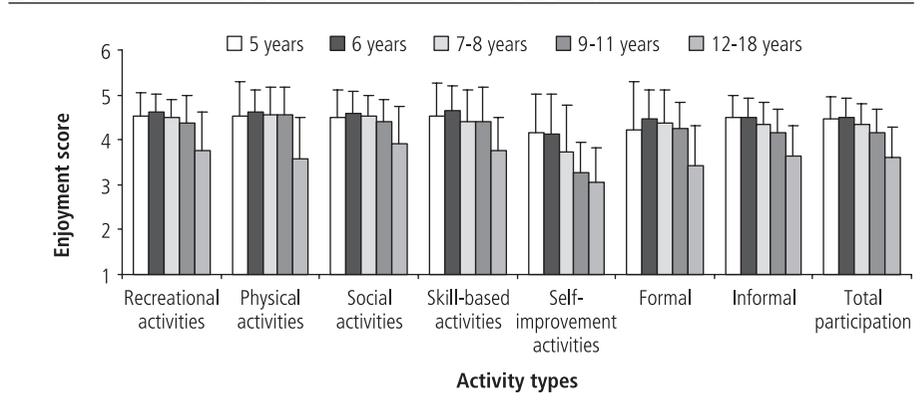


Fig. 2. Differences in Diversity scores between age groups.



Fig. 3. Differences in Enjoyment scores between age groups.



Discussion

This study examined the differences in participation patterns across age groups and between boys and girls. The results revealed significant differences between genders, where the girls had greater participation diversity and intensity

than the boys in skill-based activities and informal activities. On the other hand, the boys had significantly greater participation diversity and intensity in the physical activities than the girls. These findings are consistent with previous studies indicating a similar trend for boys' and girls' participation patterns (for example, Garton and Pratt 1991, Posner and Vandell 1999). Although significant differences were found, only a small part of the CAPE scores variance could be explained by gender. Given the small effect sizes, gender did not play a major role in explaining the participation patterns of the children and adolescents in this study. This raises the following question: could it be that the participation of boys and girls is more similar than different? This study suggests that the answer is yes and, therefore, both researchers and therapists should reconsider carefully gender differences in evaluation, intervention and future studies.

More pronounced differences in CAPE scores were found among the age groups. In most cases, participation intensity tended to increase through the age groups up to 9-11 years old and to decline when moving to the oldest group age (12-18 years), except for social and self-improvement activities. The consistent increase in social activities may be explained by the adolescents' phase of life and its implications; it is a phase where social interactions and achievement become very important as they try to find their social place in their peer group and, consequently, they are less interested in formal activities (Passmore and French 2003). These changes in social participation are also in line with the adolescence stage described by Havighurst's developmental task theory (1972). Individuals at this phase begin to learn social roles and have mature relationships with peers. Finally, during this phase in life academic demands are increasing and adolescents are engaged in many academic activities and school assignments which are part of self-improvement skills. This might explain why a decline in self-improvement activities was not observed.

The adolescents' participation intensity increased only in social activities and, therefore, it was expected that they would report high levels of enjoyment, particularly because social activities are most probably set to their choice and do not include academic activities that are mostly considered as obligatory activities. Interestingly, it was found that participation enjoyment decreased through age, particularly as children moved to adolescence (12-18 years old). This finding indicated that the adolescents' level of enjoyment was significantly lower than that of the rest of the age groups in the entire CAPE activity types. This interesting finding might be explained by their stage in life. Being a teenager might involve extreme emotional changes and search for self-identity, which could explain the group's decrease in level of enjoyment in general (Erikson 1968). Therefore, it is recommended that future studies examining participation patterns among adolescents consider and measure their emotional wellbeing.

Implications, limitations and future directions

According to this study, participation patterns in terms of diversity, intensity and enjoyment change with age and these differences do not depend on the child's gender. Furthermore, the changes in participation are mainly manifested as the child makes the transition to adolescence. These findings shed light on the understanding of the relatively new and complex phenomenon of participation. More specifically, the authors believe that therapists will have a better understanding of the participation patterns of boys and girls from different age groups. This will allow therapists better to enhance the child's participation. For example, while assessing the participation pattern of adolescents with disabilities, such as cerebral palsy, the occupational therapist will be aware of the common activities and opportunities reported by typical adolescents in the same age group; in other words, realising that a lower level of participation in formal activities with a greater involvement in social activities, characterised by a relatively lower level of enjoyment, is common among children at this developmental stage (age group).

Moreover, one of the premises of occupational therapy practice is health promotion and prevention (AOTA 2008), targeted to broad populations and not necessarily limited to individuals with disabilities or those with medically defined dysfunction (Wilcock 2005). Thus, knowledge from this study might facilitate healthy participation patterns in any child who is making the transition to adolescence or one whose participation pattern is disrupted due to an adverse environment. Yet, intervention studies are needed to examine the impact of participation on health and wellbeing among children and youth across populations and life transitions where participation is likely to be disrupted.

The generalisation of the results is limited due to the sampling method, that is, convenience sampling. The participants were recruited from a particular geographical region within the Israeli context and, hence, the generalisability of the findings is further limited. In addition, participation in this study was examined in after-school activities, which represent only part of the overall picture of childhood participation. However, participation in non-school activities provides an important context for learning and positive development (Larson and Verma 1999, Larson 2000).

Another limitation of this study is that it does not include other factors that might affect participation. Therefore, future research of participation patterns should also consider additional factors, such as the built environment (for example, presence of after-school activities centres in the child's neighbourhood), family values or attitudes towards recreational activities and family resources (for example, financial and time resources), cultural background and the child's abilities and skills. Another potential line of inquiry might focus on the relationship between participation pattern and measures of wellbeing and health. It will also be interesting to examine the changes in participation patterns due to rehabilitation intervention.

Key findings

- Participation patterns change with age, in particular as children make the transition to adolescence.
- A decrease in participation (that is, diversity, intensity and enjoyment) is observed in most of the activity types as children make the transition to adolescence.
- Gender can explain differences in participation patterns yet its effect is small.

What the study has added

This study contributes to the understanding of the nature of participation of children and adolescents throughout age and between the genders.

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