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Quality of play, social acceptance and reciprocal friendship in preschool children

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ABSTRACT

Playing with peers is one of the most important contexts for the acquisition of social competencies in early childhood. This study examined the relation between children's play behavior, social acceptance in the peer group, and number of reciprocal friendships. One hundred and twenty eight children, aged between three and five years, participated in the study. Social acceptance and number of reciprocal friendships were assessed using two sociometric measures: nomination and comparison among peers. Children's behavior during play activities was assessed by a Portuguese version of the Penn Interactive Peer Play Scale. Global results showed positive and significant correlations between positive interaction and sociometric measures, indicating that children who manifest positive play behaviors are more accepted by peers and have more reciprocal friendships. On the other hand, play disruption and disconnection were negatively correlated with sociometric measures, indicating that children who show these types of play behaviors have lower social acceptance and fewer reciprocal friendships. Parsing the correlations by the three age groups, results show distinct patterns of associations between quality of play, social acceptance and friendship in function of age. Our results stress that already at an early age, behavior during play is related to friendship and social reputation.

KEYWORDS

Peer play; ludic activities; social acceptance; reciprocal friendships

Play activities provide children with the opportunity to develop their cognitive, social and emotional competencies (Coplan and Arbeau 2009). Given that children spend most of their time playing, play represents one central context of social interactions among peers during childhood. These interactions involve social exchanges between children, in which each participant's actions are interdependent and the behavior of each one is both a response to and a stimulus for the behavior of another (Rubin, Bukowski, and Parker 2006). During play, children have the opportunity to acquire and to develop skills that contribute to positive interactions among peers (Bredekamp and Copple 1997; Coplan and Arbeau 2009). Positive interactions make a substantial contribution to children's social and emotional development. Play interactions tend to become more complex as the child grows: cooperation, empathy, as well as skills for dealing with conflict and aggression emerge during early childhood, representing the primary competencies to maintain dyadic relationships within peer groups (Hay, Caplan, and Nash 2009).

Peer relationships and friendships

During preschool, children become more selective of their peers, showing preference for peers with akin characteristics such as same gender, ethnicity, type of behavior, social participation, cognitive quality (Coplan and Arbeau 2009; Howes 2009; Rubin, Bukowski, and Parker 2006). Children show increasingly differentiated responses to positive or negative behavior by their classmates (Coplan and Arbeau 2009). Persson (2005) found that by four years of age, children who demonstrated high frequency of prosocial behavior were also more likely to be the target of prosocial behaviors. In contrast, children who displayed more aggressive behavior were less likely to receive prosocial initiatives from their peers.

Friendships constitute a form of special dyadic relationship and are of particular interest in the study of peer relations (Rubin, Bukowski, and Parker 2006). Friendship is usually defined as a mutual preference for interaction, characterized by complementarity and reciprocity during play and shared positive affection (Howes 2009).

The ability to make friends is related to children's emotional and socio-cognitive maturity (Howes 1983; Rubin, Bukowski, and Parker 2006). Dunn and Cutting (1999) also argue that the capacity to understand the emotions and social intentions of the other are associated with the establishment, maintenance and quality of friendships. Howes (1983) found that while infants have a limited number of stable peers with whom they interact, preschool children form several sporadic friendships in a short time, and show stable and lasting friendships, suggesting a developmental progression. Vaughn et al. (2001) also showed a developmental progression: older preschool children revealed a greater tendency to engage in reciprocal friendships than younger children did. Additionally, children who were involved in reciprocal friendships more often interacted with other children.

Research has found that preschool children behave differently with friends than with non-friends, engaging in more prosocial behavior and more conflicts with friends, but these conflicts tend to be resolved through negotiation and the search for common solutions (Howes 2009; Rubin, Bukowski, and Parker 2006). Children with more reciprocal friendships have more opportunity to interact with peers, and they demonstrate higher social competence than children without or fewer reciprocal friendships (Vaughn et al. 2000, 2001).

Farver and Branstetter (1994) found that children with friends reveal more prosocial responses to a peer's distress, such as approximation and comfort, than children who do not have friends. Vaughn and colleagues (2001) also observed that children with reciprocal friendships received more attention from their peers and initiated positive and neutral interactions more often, and were more accepted by peers. Consequently, having friends increased the ability to regulate interactions and emotions, fostering the skills to better understand social relations.

Social acceptance

Social acceptance refers to the way a child is appreciated by peers, while social rejection refers to the way a child is depreciated. Individual differences in social acceptance and rejection influence social adaptation and success in relations within peer groups; these

individual differences manifest in the ability to develop and maintain friendships (Rubin, Bukowski, and Parker 2006). Parker and Seal (1996) showed that children without friends were seen by their peers as shy and timid, spent more time playing alone, were more sensitive, less mature, with fewer social skills and showed more isolation behaviors and anxiety. The authors emphasize that social rejection at the preschool age is a predictor of many externalizing problems in adolescence, such as delinquency, disorderly conduct, aggression, attention difficulties and substance abuse. Moreover, the authors also argued that, over time, isolation is associated with internalization problems, such as low self-esteem, anxiety, loneliness and depression.

Ladd (1990) found that children who had more friends when they started kindergarten developed more favorable attitudes toward school during the first months; that children who maintained these friendships and in addition made new friends, demonstrated more enjoyment of school and better academic performance. Conversely, rejected children revealed less positive attitudes toward school and lower academic performance. The author argued that, even during preschool years, a strong relation between children's social acceptance and academic performance is clear.

Ladd, Price, and Hart (1988) indicated that children's behavior during playful interactions contributed to social acceptance or rejection among peers. The authors found that children that showed high levels of cooperative play at the beginning of the school year and that maintained high levels over the year, had greater social acceptance at the end of the school year. On the other hand, children showing more agonistic behaviors had a decrease in social acceptance at the middle of the school year. Walker (2004) demonstrated that rejected children were less likely to engage in prosocial cooperative behavior than any other status group, were rated as less successful generally than other groups in their group entry attempts, but were not more likely to display aggressive or disruptive behavior. A number of other studies showed associations between friendship relations, social acceptance and play contexts. These studies point out that the way children play can determine their social acceptance in peer groups as well as the type and quality of friendships they develop (Howes 1983; Ladd, Price, and Hart 1988; Putallaz 1983; Vaughn et al. 2000, 2001).

The present study aims to analyze the relation between children's behavior during play interactions as reported by teachers, and social acceptance and friendships as reported by the children. The instrument used to assess peer play (Torres et al. 2014) is a Portuguese version of a questionnaire originally design to fill a gap in social development assessment instruments for the preschool ages (Fantuzzo et al. 1995). This is the first study using this measure in a sample of Portuguese children and their teachers. Most Portuguese children attend preschool for more than five hours a day. Although there are some official guidelines of what children should start to learn, preschools teachers encourage play by organizing specific spaces in the classroom and providing free time in the playground.

We expect to find a strong association between the type of behaviors during play activities as described by teachers, social acceptance, and the number of reciprocal friendships: (1) children that, from the teacher's perspective, manifest positive play interaction behaviors will show a high level of social acceptance by peers and a large number of reciprocal friendships; (2) children that, from the teacher's perspective, manifest disruptive and disconnection behaviors during play will show a lower level of social acceptance and a lower number of reciprocal friendships; (3) the associations between play interaction behaviors

described by teachers and social acceptance; and the number of reciprocal friendships will be stronger in older children.

Method

Participants

Participants were 128 children from six preschool classes of a preschool center in Oeiras, Portugal. Their age ranged from three to five years old: 51 children were three years old (30 girls, 21 boys), 41 children were four years old (20 girls, 21 boys) and 36 children were five years old (21 girls, 15 boys). The children were from middle socioeconomic-status families. The mean age of the mothers was 34 years old ($M = 33.78$; $SD = 7.79$) and mean age of the fathers was 35 years old ($M = 35.36$; $SD = 9.29$). Both parents' mean educational level was 12 years of education (mothers: $M = 11.70$; $SD = 4.70$; fathers: $M = 10.94$; $SD = 5.30$). The participants' teachers have, at least, a degree in Childhood Education and their age ranged from 29 to 46 years old. The Portuguese education system for children 0–6 years old corresponds to Level 0 of the International Standard Classification of Education-1997 and is commonly called preschool that includes nursery care and preprimary education for children ages 0–3 and 3–6. Portuguese law requires that preschool teachers have specialized higher education in early childhood care: at least a higher degree (at International Standard Classification of Education Level 5A) in child education (Eurydice Network 2009). National studies have reported that 100% of teachers of children in the 3–6 age range had a higher degree (Barros and Aguiar 2010; Conselho Nacional de Educação 2011).

Measures

Sociometric measures: children completed two picture sociometric tasks: nominations (positive and negative nominations) and paired comparisons (McCandless and Marshall 1957). The sociometric measures were obtained through individual interviews with children, in two distinct phases: nomination task was obtained first and comparison among peers at a second time. Children were taken individually to a separate room, presented with photographs of all of their classmates, and asked to identify them. For the nomination task, children viewed an array of photographs of all their classmates and were asked to identify three peers they especially liked to play with (positive nominations) and three peers they did not especially like to play with (negative nominations). With the remaining photographs, children were asked to choose, one by one, the ones with whom they especially liked to play.

For the paired comparison task, photographs of all the possible pairs in each classroom (i.e. $(N \times (N-1))/2$) were presented to the child one at a time. For each pair, the child choose the peer with whom she/he especially liked to play. Pairs were randomly organized, and no child was seen twice before all classmates were seen once. Each child's photograph appeared the same number of times on the left- and right-hand sides of the picture file. Prior to the analyses, the scores for the two sociometric measures were standardized within each classroom. Social acceptance scores were calculated as the total number of choices received from peers (from nomination and paired comparison tasks) divided by

the number of classmates completing the task. The number of reciprocal friendships was calculated considering all three sociometric tasks. When both members of a specific dyad identified each other as preferred partners (appearing among the top 20% of positive nominations, or among the top 20% in the paired comparisons task and receiving a rating of '3' on the rating-scale task), they were designated as reciprocal friends. Social rejection was the number of negative nomination each child received from peers.

Despite sociometric measures having frequently been used to assess children's peer relations, a considerable debate concerning ethical issues is involved in sociometric testing, especially in the case of negative sociometric measures. However, previous researches indicated that children responding to negative sociometric questions under experimental conditions do not result in increased interpersonal conflict (Hayvren and Hymel 1984), does not lead preschool children to behave more negatively with disliked peers, neither alter observed patterns of children's social interaction, offering this measure a valid and reliable estimate of children's social status among peers (Hayvren and Hymel 1984).

Play behaviors: Fantuzzo et al.'s (1995) Penn Peer Interactive Play Scale (PIPPS) in the Portuguese version (Torres et al. 2014) was completed by teachers to indicate the children's patterns of play with peers. The PIPPS is a questionnaire composed of 32 items to measure three dimensions of children's responses in a free play situation: Disruption, Disconnection and Positive Interaction. Disruption is associated with aggression and includes anti-social behaviors during play ('starting fights and arguments', 'destroying others' toys'); Disconnection is associated with isolation behaviors (wanders aimlessly, being ignored by others), and Positive Interaction is associated with prosocial behaviors (sharing, helping, encouraging others). The scores for the dimensions of disruption, disconnection and positive interaction indicate the child's social competencies in a peer interaction context with minimal adult influence. Each item is measured on a four-point response scale (1 = never to 4 = always). The scale was validated using other social development measures (SSRS – Social competence scale; sociometric measures; direct observation), with different informants: observers, teachers and parents.

Procedures

The research team contacted the preschool centers using a public list available in official registries and invited them to participate in the survey. After the directive boards of the participating childcare centers gave a positive answer, the teachers were invited to collaborate in the study; the teachers then made contact with the parents of children asking them permission for their children to participate. In their contact with parents, teachers excluded children with any cognitive or physical handicap. Children's assent was guaranteed before the individual interviews. For sociometric interviews, each child was taken individually to a separate room and it was explained that the propose of the task was to understand how children play at school and how they make friends. We also explained to each child the right to withdraw at any moment during the tasks. Thus, whenever the child manifested tiredness or disinterest signs, the interview was interrupted and rescheduled to another day.

The PIPPS questionnaire was delivered to teachers asking them to check for each item how often the behavior described was observed during the free play of every child. Teachers first read the questionnaire in the presence of the observer in case of any doubt.

Both the children's sociometric interviews and the teachers' questionnaires were completed during the second academic term to give teachers and children time to become acquainted with each other.

Data analysis plan

In order to assess possible sex and age differences in children's patterns of play as reported by teachers, preliminary ANOVA analyses were performed. No similar analyses by sex and age were conducted concerning sociometric measures due to their prior standardization which precludes finding mean differences. Pearson's coefficients were then used to analyze the correlations between the three dimensions of peer play behavior scores and the sociometric measures, globally and by age levels.

Results

Preliminary analyses tested the associations between peer play behavior as well as sociometric measures with parents' age and education level. None of the correlations reached significance. Furthermore, the analyses of differences in peer play behavior scores by age group and by sex showed no significant differences.

As can be seen in Table 1, results showed that Positive Interaction had moderate positive correlations with Reciprocal Friendships ($r = .45, p < .01$), Positive Nominations ($r = .43, p < .01$) and Social Acceptance ($r = .31, p < .05$). Results also showed that Disconnection dimension had moderate negative correlations with Reciprocal Friendships ($r = -.35, p > .05$), Positive Nominations ($r = -.32, p < .05$) and Social acceptance ($r = -.30, p < .05$) and weak negative correlations were found between Social Rejection ($r = -.25, p < .05$) and Paired Comparison scores ($r = -.29, p < .05$). Finally, for the Disruption dimension, a

Table 1. Correlations between quality of play, social acceptance and reciprocal friendship.

	Reciprocal Friendships	Positive Nominations	Paired Comparisons	Social Acceptance	Social Rejection
<i>Total</i>					
Positive Interaction	.45**	.43**	.16	.31*	.03
Disconnection	-.35*	-.32*	-.29*	-.30*	-.25*
Disruption	-.24**	.05	-.09	-.05	.25*
<i>3-Year-Olds</i>					
Positive Interaction	.58**	.41**	.14	.29*	.02
Disconnection	-.43*	-.31*	-.21	-.31*	-.11
Disruption	-.28	.02	-.04	.00	.16
<i>4-Year-Olds</i>					
Positive Interaction	.34*	.14	.15	.16	.21
Disconnection	-.34*	-.15	-.26	-.23	.33*
Disruption	-.14	-.32*	-.15	-.25	.28
<i>5-Year-Olds</i>					
Positive Interaction	.08	.21	.34*	.30	-.27
Disconnection	-.11	-.36*	-.31	-.36*	.41*
Disruption	.01	-.05	-.23	-.15	.33*

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

weak positive correlation was found with Social Rejection ($r = .25, p < .05$) and a weak negative correlation with Reciprocal Friendships ($r = -.24, p < .05$).

Regarding the correlations between the dimensions of peer play and sociometric measures at age three, Positive Interaction was positively and strongly correlated with Reciprocal Friendships ($r = .58, p < .01$), moderately with Positive Nominations ($r = .41, p < .01$) and weakly with Social Acceptance ($r = .29, p < .05$). Negative moderate correlations were found between Disconnection and Reciprocal Friendships ($r = -.43, p < .05$), Positive Nominations ($r = -.31, p < .05$) and Social acceptance ($r = -.31, p < .05$). No significant correlations were found between Disruption and sociometric measures.

Regarding children at age four, a positive correlation was found between Positive Interaction and Reciprocal Friendships ($r = .34, p < .05$). Negative correlations were found between Disconnection and Social Rejection ($r = .33, p < .05$). Finally, Disruption was negatively correlated with Positive Nominations ($r = -.32, p < .05$).

In the five-year-old group, Positive Interaction was positively correlated with Paired Comparisons ($r = .34, p < .05$) and Social Acceptance ($r = .30, p > .05$). Disconnection was positively correlated with Social Rejection ($r = .41, p < .05$) and negatively correlated with Social Acceptance ($r = -.36, p < .05$) and Paired Comparisons ($r = -.40, p < .05$). Finally, a positive correlation was found between Disruption and Social Rejection ($r = .33, p < .05$).

Overall, our results showed positive correlations between the type of play activities and sociometric measures, indicating that children who manifest positive play behaviors in the view of their teachers show a greater social acceptance by peers and a larger number of reciprocal friendships. Disruption and disconnection play behaviors were negatively correlated with sociometric measures, indicating that children who manifest these types of behaviors show lower social acceptance and fewer reciprocal friendships. However our results also show that isolation behaviors have a more significant association with sociometric measures than disruptive behaviors.

Discussion

The goal of this study was to analyze the association between children's behaviors during play interactions as reported by teachers, and peer to peer assessment of children's social acceptance, and reciprocal friendships established. Consistent with many previous studies (Howes 1983; Ladd, Price, and Hart 1988; Putallaz 1983; Vaughn et al. 2000, 2001) our results are compatible with the theory that the way children play can determine social acceptance and the development of friendships in early childhood (Howes 1983; Ladd, Price, and Hart 1988). However, in the present study we cannot infer causality in the association between variables because it is a correlational study

Previous studies have shown that children are proactive in the selection of their peers and that they demonstrate increasingly differentiated responses to positive or negative behavior by their peers (Coplan and Arbeau 2009; Persson 2005; Rose-Krasnor and Denham 2009). Children tend to reward positive and prosocial behaviors with consistent answers, even in preschool. In peer groups social rules are established according to which behaviors the members consider more appropriate, and certain ways of behaving are accepted or rejected

within the group according to the established rules, influencing the acceptance or rejection of the child who manifests them (Rubin, Bukowski, and Parker 2006).

Furthermore, children with greater social acceptance, that can be considered popular children, show cooperative behavior, do not engage in disruptive behaviors and frequently participate in constructive play (Rubin, Bukowski, and Parker 2006). In turn, children without friends demonstrate isolation behaviors, spend a good deal of time playing alone, show fewer social skills, and are seen as shy (Parker and Seal 1996). However, and in what concerns play behaviors of a negative character, our results demonstrate in addition that disconnection/isolation behaviors have a more significant association with sociometric measures than disruptive behaviors.

According to Lindsey (2002) children can develop and maintain friendships during preschool years. In his study, 75% of children had a least one friend in their classroom and out of 10 friendships dyads that were not disrupted by one partner leaving the Child Center Care, six maintained their friendship status across two years. Also, children with a greater number of friends were rated by teachers as being more competent and were better liked by peers. High-accepted children were almost twice as likely to be involved in mutual friendships as low-accepted preschoolers.

Rubin and colleagues (2006) suggested that the behavior of rejected children, who may reveal isolation characteristics, timidity and distrust, can reflect an association between social rejection and oppression for shy children. Accordingly, our results in the group of children aged five show that the strongest correlations are related to the association between disconnected behavior and the sociometric measures, with the exception of reciprocal friendships. In this age group, reciprocal friendships do not show significant associations with disconnected behavior, which suggests that reciprocal friendships are not affected so much as social acceptance by social isolation.

Parker and Asher (1993) found that children with low social acceptance can establish reciprocal friendships, especially in the case of older children. Conversely, they also found that although children with greater social acceptance are more likely to establish a mutual friendship with a best friend, not all children with greater social acceptance have a best friend. These results are compatible with the ones found in the present study and suggest that there is a distinction between two levels of social interaction; a) the group level, which is related to social acceptance or rejection in the peer group, and b) the level of dyadic relations, which is reflected in reciprocal friendship relations (Rubin, Bukowski, and Parker 2006). Rubin and colleagues (2006) emphasized that social isolation and shyness are individual characteristics that may have a negative effect on the peer group but may not affect the formation, prevalence and maintenance of friendship relations in childhood.

Our results also show that reciprocal friendships is the measure that is most strongly associated with positive play behaviors, when compared with the remaining sociometric measures. The greatest number of significant correlations between reciprocal friendships and positive play interaction were found at age three and four, suggesting that already at an early age, behavior during play is a concern in the choice of friends.

Concerning the analyses of differences in sociometric scores or peer play behavior scores by age group we found no significant differences. These results are at odds with the dominant theory of social participation and peer interaction at preschool age which states that there is a developmental sequence (Coplan and Arbeau 2009; Johnson et al.

2000; Parten 1932; Vaughn et al. 2001). The authors suggest that at this stage clear developmental advances are visible in peer interaction, which becomes more frequent, richer, more complex and sophisticated during preschool age. However, our results suggest that from an early age children demonstrate a concern in the selection of their peers and friends.

In accordance with our results, Howes (1983) argued that younger children, like older children, tend to establish friendships with children who share common interests and behavioral styles. This aspect may be related to the change of paradigm regarding social participation of children advocated by several authors, contradicting the theory of Parten. Similarly, Dunn and Cutting (1999) pointed out that from very early on friendship relations are strongly influenced by individual characteristics, highlighting socio-cognitive skills as a relevant issue. The ability to understand other children's emotions and thoughts develops from the age of two and is a very important factor in the relations of friendship and social interaction of preschool children.

In summary, the findings of the present study indicate that the way children play and the behaviors manifested in play contexts as reported by their teachers are associated with social acceptance by peers within a group, as well as with the social participation and maintenance of reciprocal friendships. Our study also shows that not only disruptive but also disconnected/isolated play, are both associated with low peer acceptance and less friendships.

Peer play interactions are an important developmental context at various levels. In particular the development of social emotional competencies give children the opportunity to acquire a set of behaviors, skills, experiences and attitudes that influence lifelong adaptation (Bredekamp and Copple 1997; Coplan and Arbeau 2009; Rubin, Bukowski, and Parker 2006). On the other hand, aspects such as social acceptance and friendship relations can act as facilitators of appropriate behaviors in interactions among peers.

Children's awareness of the social costs and benefits associated with a particular behavior can also lead to an adjustment of the type of behavior in the context of play interactions. On the other hand, social rejection can lead to internalizing problems, such as low self-esteem, anxiety, loneliness and depression, and externalizing problems, as well as infant and juvenile delinquency, inappropriate behavior, risk behaviors, substance abuse and school failure, in adolescence (Rubin, Bukowski, and Parker 2006).

In fact, several studies have evaluated the concordance of sociometric measures concerning the stability of social status demonstrating that sociometric measures, such as acceptance, rejection, social preference and appreciation scale, had satisfactory levels of concordance and strong correlations over time (Jiang and Cillessen 2005; Wasik 1987). Peceguina, Santos, and Daniel (2008) found levels of significant concordance between sociometric measures in preschool ages, with exception of negative nominations that showed no significant correlations according to age and gender. The authors also verified that as age increases, the coherence between the measures increases as well, suggesting a progressive consolidation of social organization structures, as age's increase (Peceguina, Santos, and Daniel 2008; Santos et al. 2014; Santos et al. 2015). Denham and Holt (1993) found that children's social behavior in their first year of preschool predicted how well liked they were. Their popularity during the second year was more highly related to their sociometric ratings the first year than to their behavior during the second year. It seems that children formed an opinion of their peers based on how they

behaved the first year and that first impression stayed with them. Walker (2009) tested sociometric stability and change six months after initial classifications and found that preschool children's social status classifications showed a moderate to high rate of stability for those children classified as popular, rejected, or neglected.

Children spend most of their time in school, and kindergarten is an excellent environment for detection of potential problems and early intervention in order to prevent maladaptive behaviors at the level of disruption and isolation. Given that play activities in the preschool are a privileged context for peer interaction, it is important to promote positive interaction behaviors between peers and to prevent disruptive or isolation behaviors.

Professional adults involved in preschool context and parents are privileged agents to promote socially adjusted behavior and to foster the development of socioemotional skills that facilitate children's interactions among peers. It is important for teachers and parents to help very young children develop positive social skills and friendships as these may have a strong impact on peer acceptance. Adults should help the child to become more aware of others, to interpret other children more accurately and interact with them in a positive way. Establishing close ties with classmates during preschool years can provide children with a sense of security they need for exploring and coping with new surroundings.

One limitation to our study should be noted. The instrument used to evaluate the type and quality of play only reveals the perspective of teachers. First, there is possibility of biases from the interaction between teacher-child and the fact that only one person evaluated the children's behavior, and therefore it was not possible to analyze the agreement between observers. Future studies should collect data through the observation of different researchers allowing a closer perception of the reality. Second, the teacher's perspective may differ from the perception of peers; a behavior considered negative by the teacher may not have the same impact on the peer group. Thus, an instrument could be used that would directly assess the children's perception of peers' behavior. Future research should explore the relations and interactions of peers within other contexts, such as an informal environment, with the possibility of establishing forms of intervention that make it possible to foster positive interactions. It would also be interesting to undertake longitudinal studies which could allow the evaluation of the impact of play on social emotional development in the long term, particularly in adolescence.

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