Children's Time Use and Social Skills – a contribution to the development of social skills programs

Vitor Manuel dos Santos Teixeira
Orlanda Maria da Silva R. Cruz

University of Porto – Portugal
Faculty of Psychology and Educational Sciences

Paper submitted to the 28th Annual Conference on Time use Research
TIME USE RESEARCH– AN INTERDISCIPLINARY ISSUE
16 - 18 August, 2006 Copenhagen, Denmark
(Draft version: July 2006)

Abstract

In this study we analyse the association between children's Time Use and their Social Skills. Participants were 112 children, aged eight and nine (52 girls and 60 boys) living and studying in the Metropolitan Area of Porto. Children's time use was collected through a time-diary, adapted from the Child Development Supplement of Panel Study of Income Dynamics (University of Michigan). Social skills were measured using the Portuguese adaptation of the Social Skills Rating System (SSRS). Cluster analyses revealed the existence of three groups of children with different patterns of time use. Statistical analysis revealed an association between the pattern of time use and some dimensions of social skills. For instance, the pattern with more time devoted to unstructured outdoor activities, without adult supervision, and with less time with parents, is associated with lower levels of assertion, cooperation and self control. Results are discussed and some clues are presented to implement programs to promote social skills and prevent anti-social behaviour, based on Time Use.

Introduction

The human being lives in society. The others are an integrant part in the development of each individual throughout its life cycle, in such a way that, the feeling of being related with the others is one of the basic psychological needs in the child (Pomerantz, Grolnick, & Price, 2005). To find the most functional and adaptive ways to be related with the others is an important developmental ability (Marinho & Caballo, 2002). Thus, having good social competence allows efficient interactions with the others and prevents socially unacceptable relations (Gresham & Elliot, 1984).

As social competence is a "multidimensional construct, which includes social/interpersonal, cognitive and emotional factors" (Lemos & Meneses, 2002), it refers to judgements from the others (in this case the teachers) about the presence or absence of specific social skills. For its side, social skills are "behaviours that need to be taught, acquired and then practiced until the skill is exhibited fluently by a student in the appropriate setting" (Lane, Menzies, Barto-Arwood, Doukas & Muntom, 2005, p. 18).

In the school context social competence is positively associated to dimensions as acceptance by the teachers, academic achievement, peer acceptance and positive relations with peers and friendship (Lane et al, 2005; Lemos & Meneses, 2002). It is therefore important to help children develop their social skills in order to promote their success in school (Gresham, 2002).

Researchers interested in child development developed many programs to promote children and youth social skills. When analyzing the components of these programs, it is possible to identify four main targets of intervention: child, peer group, family and teachers. Being the child the main focus of intervention, the work methodologies usually used are: direct instruction; modelling, role play and practice (Lane et al., 2005). Since the peer group provides important chances to strengthen already existing social skills, to adjust others, and to teach new ones (Elliot &Gresham, 2001), it is in group that the most of programs are realized. On the other hand, recognizing the role of families, Marinho and Caballo (2002) presented a group intervention program to parents, proposing some components based in children's behaviours and in parental attitudes to adopt in face of these behaviours. Finally, in what concerns the teachers, Barton-Arwood, Murrow, Lane, and Jolivette (2005) show

the positive effects of an intervention program conceived to become the teachers most efficient in the promotion of social skills on their students. Also in this case, the components of the program are mainly based in the instruction of attitudes to adopt when facing to specific behaviours from their students.

It is a fact that several studies confirm the efficacy of the programs conceived to promote social skills, resulting in positive effects on children like less disruptive behaviour in the classroom, improved social interactions on the playground and higher levels of academic engaged time in the classroom (Lane et al, 2005, p.26). The social skills programs could also have a positive effect in children's bonding to school (Hawkins, Guo, Hill, Battin-Pearson & Abbott, 2001).

However, there is an important dimension of child development that could have an important effect in social competence, but has not been included in the social skills programs: time use.

As it is stated by Hofferth and Sandberg (2001), the way children spend time affects their cognitive and social development. Time, as economists tell us, is a resource that can be used productively or squandered (Larson, 2001) and, children's time use, can be used for the development of their social competences and other dispositions related with a healthy emotional adjustment (Larson & Verna, 1999). More than provide opportunities to be related with the others, activities provide contexts for achievement and each context involves the participant in a set of behaviours, rules and knowledge (Larson & Verna, 1999). Thus, the amount of time can function as an estimate of the exposition to different social situations, with more time dedicated to develop the abilities and the knowledge of that context (Hofferth & Sandberg, 2001).

Anti-social behaviour, for instance, is described by Marinho and Caballo (2002) "as an handicap in the social skills" (p.142). However, studies about time use note that the situations that lead the deviant behaviours are particularly prevalent in activities not structured, with peers and in the absence of authority figures (Osgood, Wilson, O'Malley, Bachman & Johnston, 1996; Osgood & Anderson, 2004) existing an association between time spent in this kind of activities and externalizing problems (Teixeira, 2004). Parke and Buriel (1998) emphasise the importance of parental supervision, reporting that parents of antisocial and delinquent children provide less supervision and less monitoring of its children' activities, than parents of non delinquent

children. On the same line, Cosden, Morrison, Gutierrez e Brown (2004), state that student participation in structured activities, religious activities and time spent with the supervision of adults have a positive impact on students grades, while students "who spend more time without structure (for instance, hanging around with friends) are at risk for negative school outcomes" (p. 220).

Several authors (Fletcher, Nickerson & Wright, 2003; McHale, Couter & Tucker,2001; Parke & Buriel, 1998) detach de importance of structured activities as being the way of spending free time that more promotes development, and being positively associated to dimensions as school performance, psychosocial maturity, and social competence (Fletcher et al, 2003). According to Parke and Buriel (1998), the participation of children in free time formal organizations is also associated with higher levels of competence to take social perspective in children with 10 years old. For these authors the participation of children in organized activities is important because it gives the possibility to access a great range of social activities and an opportunity to practice social skills, which can contributes to their social development. One possible interpretation for the importance of this kind of activities is that "the discipline, self-direction and sense of competence that can come from working on a hobby or playing a sport may be congruent with a developmental need for a sense of "industry" in middle childhood" (Kleiber, 1999; in McHale, Couter, & Tucker, 2001, p.1774). Osgood and collaborators suggest an explication "too busy to do make bad things", reporting that time spent in any non deviant activity must be negatively associated to levels of deviant behaviour.

Although there is a great tradition in psychological studies that try to find group patterns of behaviour, and analyze differences between groups concerning some individual outcomes (McGroder, 2000), we didn't find studies that try to find these patterns related to the way children spend their time and their association with children developmental outcomes. From this limitation in investigation emerge the two first research questions: *How do the dimensions of time use combine to yield distinct "clusters" of children's time use? What is the relation between the different patterns of children's time use and measures of children's social skills?*

However, both social skills and time use are widely influenced by background variables. Being maternal education that "between the socio-demographic variables,

which is more associated with parenting" (Hoff et al., p. 234) it's a dimension to have in account. There is also a strong empirical evidence confirming that the level of parental education is one of the main factors contributing to the observed qualitative variations in the use of the time of children (McHale et al., 2001), and which also influences many dimensions of child development (Teixeira & Cruz, 2005). Though, the final research question is: *in what extent maternal education contributes to the differences found in children's time use and in social skills values between groups?"*

In this study we will try to test the hypotheses that the organization of children's daily routine has implications in their social competence. Though we expected that children which daily routine has several characteristics, such as more time devoted to structured activities with adult supervision, will present higher levels in several dimensions of social competence. It will thus make sense to intervene on children's daily routines if the goal is to promote their social skills.

Method

Participants

One hundred and twelve, eight to ten year-old children participated in this study, 52 girls and 60 boys. All children attended the third year of schooling, and were chosen from 9 classes belonging to 8 elementary schools in the Metropolitan Area of Porto-Portugal[1]. Children with more than one year of retention or having any handicap or significant learning disabilities were not included. Table 1 presents some demographic information on the participants.

[1] In the north of the country, Porto is the second largest city in Portugal: its Metropolitan Area has approximately 1,200,000 inhabitants.

Table 1 Participants characteristics

		n	%
Gender	Female	52	46,4
	Male	60	53,6
Type of family	Bi-parental family	90	80,4
	Other family	22	19,6
Maternal Education	1 to 4 years	23	20,5
	5 to 9 years	32	28,6
	10 to 12 years	26	23,2
	13 to 17 years	21	18,8
	Missing data	10	8,9

From an initial sample of 132 children, 20 were later excluded by the following reasons: insufficient information (12 children); missing school at the day of the week assigned to complete the time diary, making that an atypical day (8 children).

Measures

Social Competence

The social competence was measured with the Portuguese adaptation (Lemos & Meneses, 2002) of the *Social Skills Rating System (SSRS) (Teacher Form)* from Gresham and Elliott (1990).

The SSRS is composed of three scales: social skills, problem behaviours, and academic competence.

The social skills scale assesses the frequency of assertion, self-control, and cooperation subscales. The frequency of specific social skills was rated on a 3-point "how often" Likert-type scale: 0 (*never*), 1 (*frequently*), and 2 (*very often*). Cronbach's α to this scale was .93.

The problem behaviour scale includes internalizing, externalizing, and hyperactivity subscales, rated in the same way as the social skills subscales. Cronbach's α to this scale was .91.

The academic competence scale contains nine items rated on a 5-point Likert-type scale. Each point corresponds to a given cluster in the classroom 1 (lowest) to 5 (highest). Cronbach's α to this scale was .96.

Time use

To obtain information about children's time use we made an adaptation of the time diary from the Child Development Supplement (CDS) of the Panel Study of Income Dynamics from Michigan's University (PSID, 2004).

Children were asked to specify the activities carried out in two days: the week-day before the day of the interview and the last Sunday. For each activity children were still requested to indicate: a) what time the activity began and finished; b) where they were; c) who was doing that activity with them; d) who was also in that place but not directly involved in that activity; and f) what else were children doing at the same time. All the time diaries reported to the 24 hours of a day, since the 0h00m up to the 24h00m of that same day. The time diaries were filled out chaining the activities one in the other, that is, the time of the end of an activity coincided with the time of beginning of the following one. So, the sum of the time spent in the full range of activities carried out along one day was 24 hours, zero minutes and zero seconds.

The activities referred on time diaries were coded in a four digits system according to the codebook from the CDS (PSID-CDS, 2003). The 105 different activities reported by children were grouped, in a first level, in the six categories identified by Yeung and collaborators (2001). These six level-1 categories were divided in the 17 level-2 categories that we used in our analyses. Table 2 summarizes the categorization system with some examples of activities in each one and the mean times on each category on weekday and weekend.

Table 2 Categories of activities and mean and standard deviation for each one.

Category	***Examples of activities***	Weekday (*n*=112)	Weekend (*n*=112)
Meals	*Eating meals at home and away from home.*	1:33 (0:32)	2:01 (0:50)
Personal Care	*Washing, showering, bathing, dressing; getting ready,…*	0:31 (0:21)	0:32 (0:30)
Sport activities	*Playing soccer, basket, doing gymnastics...*	0:25 (0:50)	0:22 (0:57)
Outdoor Leisure Activities	*Playing outdoors with friends; walking for pleasure, bicycling,…*	2:08 (1:50)	1:47 (2:30)
Other Active Leisure	*Paintin, drawing, play indoors,...*	1:03 (1:27)	1:08 (1:51)
Electronic Games	*Games with computer, or other electronic games.*	0:17 (0:44)	0:29 (1:03)
Passive Leisure	*Watching television, listening to music, relaxing, etc...*	1:33 (1:29)	3:12 (2:49)
Organized activities	*Helping organizations; Attending a before or after school club…*	0:13 (0:36)	0:07 (0:27)
Lessons	*Lessons/in class, excluding breaks and meals at school*	4:14 (0:35)	----------
Learning Activities	*Studying, doing homework*	0:41 (0:43)	0:07 (0:23)
Domestic Work	*Meal cleanup, clearing table , dusting, making beds…*	0:06 (0:17)	0:18 (1:11)
Shopping and services	*Groceries; supermarket; shopping for food; hairdressers,…*	0:02 (0:11)	0:10 (0:29)
Visiting and socializing	*Visiting with others; party; wedding reception, at bar;*	0:11 (0:46)	0:38 (1:10)

Religious activities	*Attending services of a church; praying*	0:04 (0:14)	0:14 (0:35)
Cultural Events	*Attending sports; movies; theatre, museums, exhibitions…*	0:00 (0:00)	0:23 (1:20)
Travels		1:06 (0:42)	1:20 (1:12)
Sleeping		9:37 (1:18)	11:01 (1:53)

Note: Standard deviations are in parentheses.

In what refers to the social context of interaction, in this study we had in account time spent with mother, time spent with peers, and time spent alone. Concerning the local, it was measured the time children spent at home, travelling and outdoors.

Procedure

Time diaries were administrated in a specific room on children's elementary schools, by five interviewers previously trained, in the period between May, 23 and Jun, 26, 2006. All children participating in the study had permission from their parents. Each child filled two diaries, one concerning a day of the week (the previous day) and the other a weekend day (the last Sunday). The interview lasted about 30 to 35 minutes.

The teachers were requested to fill a questionnaire concerning demographic information as well as the SSRS for each child.

Results

The analyses of the results were made in two moments. In a first moment, to identify groups with different patterns of time use, it was realized a K-means cluster analyses with three dimensions of children's time use: the activity, with whom and where the children were. In a second moment, the groups were analysed concerning social skills.

Identification of time use patterns

The K-means cluster analysis revealed three different groups of children in function of the way they spend time. Table 3 presents means and standard deviations of the time use variables that had a higher *F* value in ANOVA, that is, the variables that most contributed to the definition of the clusters.

Table 3. Means on time use dimensions in each cluster.

	Cluster				
	Home based (n = 68)	Family based (n = 23)	Outdoor based (n = 21)	*df*	*F*
Sleeping at weeend	11:20	10:01	11:06	109	4,533*
Sport activities at weekend	0:09	0:32	0:53	109	5,713**
Outdoor Leisure Activities at weekend	1:00	2:25	3:36	109	11,318**
Passive Leisure at weekend	4:10	1:50	1:36	109	12.063**
Travels at weekend	0:56	2:35	1:16	109	21,743**
Outdoors at weekday	0:19	0:34	2:16	109	17,076**
At home at weekend	20:09	13:30	13:30	109	81,606**
With mother at weekday	1:47	2:17	0:56	109	4,631*
With mother at weekend	3:46	9:05	2:02	109	51,638**
With friends at weekend	1:33	0:55	4:48	109	16,707**
Alone at weekend	3:49	1:16	1:37	109	13,349**

**p<.01; *p<.05

One major group (around 60.7% of the sample) which we called “home based”, is characterized mainly for being the one where the children, on average, spend more time at home, more time in activities of passive leisure and more time alone. It is also in this group that children, in weekend, spend less time travelling. In the second group, named “family based” (around 20.5% of the sample), children spend more time travelling and less time sleeping. It is also the group in which, on average, children spend more time with mother. Finally, the third group, named “outdoor based” (around 21% of the sample), is that where children, on average, spend more time in outdoor leisure activities and less time in passive leisure activities on weekend. This is also the group where children spend more time with friends, and less with mother.

A discriminant function analysis – stepwise method – was conducted to understand which time use variables are responsible for distinguishing among these groups of children. Besides the main time use variables reported behind, the variable “maternal education” was also included in the analysis in order to understand in what extent it contributes to the differences found between the three groups.

From the 112 participants, 10 were excluded because of missing data in one of the discriminant variables (maternal education). Thus the analysis was made with 91.1% of the participants.

Box’s M-test was significant (F= 4.34, p<.00) which indicated not homogeneous variance-covariance matrices for each group. Because the groups had different dimensions, this factor should contribute to more dispersion in the group with more cases. We decided to continue with the analysis assuming that some cases could be classified in the group with more dispersion.

The discriminant analysis revealed two significant functions (p<0.00). Based on values of Wilk's lambda, discriminant function 1 accounted for 69,2% of the variance, and discriminant function 2 explained 30,8% of the remaining variance between the three groups.

The stepwise procedure only kept three variables in the model, those who maximizes the differences between the three groups: "at home at weekend", "with mother at weekend", and "travels at weekend". The other variables where excluded from the analysis by the test of multicolinearity. The structure matrix shows bivariate correlations between each of predictor variables and each of the two significant discriminant functions (see table 5).

Table 5 Structure Matrix - bivariate correlations between predictor variable and each discriminant functions

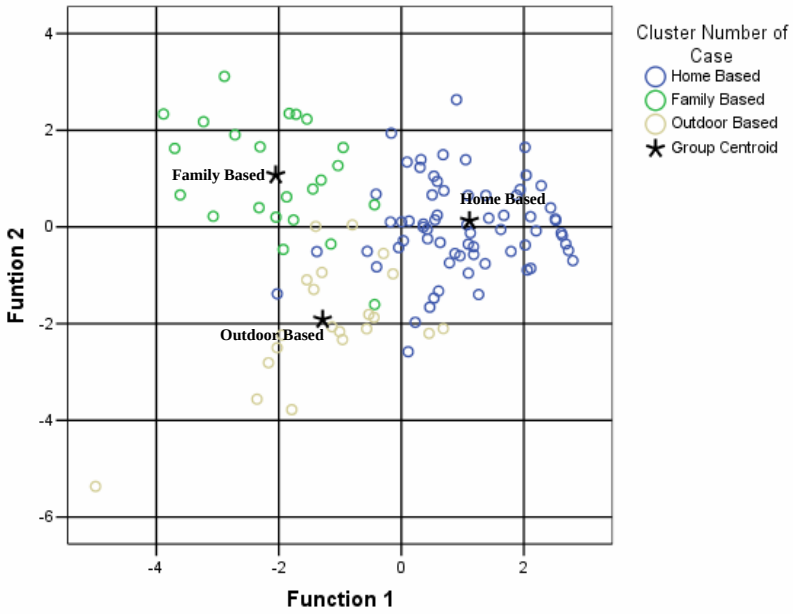
	Discriminant Function	
	1	2
At home at weekend	**.958***	.261
Travels at weekend	**-.408***	.287
Sleeping at weekend[a]	.382*	-.176
Alone at weekend[a]	.327*	-.077
Maternal education[a]	-.141*	.050
Passive Leisure at weekend[a]	.137*	.101
Outdoor Leisure activities at weekend[a]	-.105*	-.028
With mother at weekend	-.402	**.809***

* Largest absolute correlation between each variable and any discriminant function.
[a] This variable not used in the analysis.
Note: Correlations important to the interpretation of discriminant function are bolded.

The first discriminant function is positively correlated with time spent at home and negatively correlated with time travelling, both at weekend. The second discriminant function is positively correlated with time spent with mother at weekend.

As shown in Figure 1, the centroids of the groups are very distant, indicating significant differences between the three groups.

Figure 1 Territorial map of participants relative to their time use and maternal education.



Analysing the figure 1 it is also possible to observe that the first discriminant function explains basically the differences between the group “Home Based” and the group “Family Based” and that the second discriminant function explains essentially the differences between the group “Home Based” and the group “Outdoors Based”.

Finally, Table 6 summarizes the model ability to classify correctly the participants in their time use group. After validation, 87,5% of the participants were classified correctly.

Table 6 Classification for all significant discriminant functions after validation

		Predicted group membership, *n* (%)		
Groups	*n*	1	2	3
1. Home Based	68	60 (88.2)	1 (1.5)	7 (10.3)
2. Family Based	23	1 (4.3)	20 (87.0)	2 (8.7)
3. Outdoors Based	21	1 (4.8)	2 (9.5)	18 (85.7)

Note: Percent of correctly classified cases: 87.5% ($p<0.05$).

Relation between time use and social competence

To examine the relation between time use and social competence, the various dimensions of the SSRS were examined across each of the three time use groups. In

Table 7 are presented the mean values for each of the measures of social competence in each group, and the results of the respective oneway analysis of variance (ANOVA).

Table 7 – ANOVA results – means on social competence measures by time use cluster group.

	Cluster				
	Home Based (*n* = 68)	Family Based (*n* = 23)	Outdoors Based (*n* = 21)	*df*	*F*
Social Skills	40,76 (13,09)	38,34 (15,43)	29,57 (14,99)	2	5,16**
Cooperation	14,61 (5,37)	14,17 (5,51)	10,52 (5,47)	2	4,65**
Assertion	13,69 (4,56)	12,30 (5,26)	9,90 (5,71)	2	4,80**
Self-control	12,45 (4,88)	11,86 (5,56)	9,14 (4,95)	2	3,48*
Problem behaviour	5,14 (6,52)	4,56 (6,35)	6,85 (5,04)	2	,828 ns
Externalizing	2,33 (3,35)	1,95 (3,54)	3,04 2,88)	2	,618 ns
Hiperactivity	2,01 (2,84)	1,82 (2,85)	2,95 (2,24)	2	1,13 ns
Internalizing	,79 (1,20)	,78 (,73)	,85 (1,19)	2	,030 ns
Academic competence	21,86 (5,59)	21,13 (6,09)	18,23 (5,45)	2	3,28*

Note: Standard deviations are in parentheses.
**p<.01; *p<.05

Results indicate significant differences between the three groups of children in relation to the three subscales of Social Skills scale: Self-control ($F(2)=3,48$, $p = .03$), Cooperation ($F(2)=4,65$, $p =.01$) and Assertion ($F(2)=4,80$, $p =.01$). In any of the cases, the group "home based" presents lower values, and there is no significant differences between the other two groups. These results are confirmed by the Social Skills scale, with significant differences between the groups ($F(2)=5,16$, $p =.01$), with the group "outdoor based" presenting the lower result.

In the Problem Behaviour scale there is no significant differences between the groups ($F(2)=.82$, $p=.44$), neither in any of its three subscales. However it is interesting to note that the group "family based" presents the lower results, and the group "outdoor based" presents the higher values. It seems to appear an inversion of the tendency between the groups "home based" and "family based" in what concerns the "Problem

Behaviour" and the "Social Skills". The first group seems to be more effective in promoting social skills, and the second more effective in protecting against problem behaviours.

Finally, also in the "Academic Competence" scale we found significant differences between the three groups ($F(2)=3,28$, $p=.04$), with the lower average values in the group "outdoors based".

Then we tried to control the effects of maternal education on the observed differences in social competence between the three groups. The correlation between maternal education and the dimensions of social competence was analysed using Pearson correlation coefficient. The results show the existing of moderate, positive and significant correlations between maternal education and the values of self-control ($r=.329$, sig.<.01), cooperation ($r=.331$, sig.<.01), assertion ($r=.481$, sig.<.01), social skills ($r=.416$, sig.<.01) e de academic competence ($r=.546$, sig.<.01).

An ANCOVA was conducted, with social skills scale (and respective subscales) and academic competence as dependent variables, time use cluster group as the independent variable, and maternal education as a covariate.

Time use cluster group no longer predicted differences in the social skills scale, $F(2, 111)=2.76$, $p=.068$, once maternal education, $F(1, 111)=14.55$, $p=.000$ entered the model. Similarly time use cluster group no longer predicted differences in the subscales of self-control, $F(2, 111)=2.23$, $p=.0113$; cooperation, $F(2, 111)=2.966$, $p=.056$; and assertion $F(2, 111)=1.64$, $p=.199$, once maternal education, $F(1, 111)=7.88$, $p=.006$; $F(1, 111)=7.93$, $p=.006$; $F(1, 111)=22.52$, $p=.000$, respectively entered the model. On the same way, time use cluster group no longer predicted differences in the academic competence, $F(2, 111)= .47$, $p=.626$, once maternal education, $F(1, 111)=36.35$, $p=.000$, entered the model.

Discussion

It was our main goal, as stated in the first research question, to understand how children were organized in different groups as a function of their time use. In fact, exploratory analysis revealed the existence of three groups of participants who are clearly defined by different patterns of time use.

In the definition of the groups it is relevant to note the importance of weekend and of leisure time. The time spent at school does not allow variability on time use during the week. It seems that, only at weekend, children and their family could do what they really want and, because of that, only then we can see the differences related to the individual options.

From the analysis of the characteristics of each group we detach the great amount of time that the participants of the major group spend inside their homes. This result is particularly relevant if we take into account that data was collected in June, with climacteric conditions favourable to outside activities. These results seems to confirm the tendency for children to have "less access to the external spaces in the city, which must be related to the fears of the parents related with the traffic, possibility of deviant behaviours and crime and also due to proper deterioration of the physical spaces" (Jutras, 2003, p.263). Also important is the fact that, from all the time they spent at home, it is greater (than from the other two groups) the amount of time they spend sleeping, and a great part of their awake time is spent in passive leisure activities, mainly watching television and alone.

However, there is a group of participants (18% of the sample) who spend a great amount of their leisure time outdoors. They do essentially sport activities (playing ball games) or unspecified and unstructured activities. These are moments spent mainly with peers and without adult supervision. The lower values of maternal education in this group, allow us to understand that this is clearly associated with the disfavoured social conditions, for instance those who lives in social neighbourhoods, where the space between the buildings is used to meetings and to play.

There is also a group who is manly characterized by the great amount of time children spend with their parents on weekend. They are also the ones that spend less time sleeping and more time travelling, giving the idea that they have a more active life.

The results also confirmed the importance of maternal education in the qualitative differences of children's time use. However, although the discriminant value of maternal education in the definition of the groups, they have been time use variables that have defined the two discriminant functions. Thus, the amount of time spent at home, time travelling and time with mother, seems to be determinant in the definition of patterns of organization of every day life.

The oneway analysis of variance confirms the existence of differences in several measures of social competence between the groups of participants identified as a function of their pattern of activities. Belonging to the group "outdoors based", that means, with more time spent in outdoor unstructured activities, with friends and without adult's supervision, is associated to lower values in the various measures of social skills and in academic competence. These results are consistent with results from "studies investigating the relationship of time use to a variety of outcomes [which] have consistently found that rates of deviant behaviour are higher among adolescents who spend more time in unstructured socializing with peers, away from authority figures (Osgood & Anderson, 2004) and complements the idea that anti-social behaviour is a social skills handicap (Marinho & Caballo, 2002). Thus, although the covariance analyzes indicates that the observed differences are due mainly to maternal education (confirming the importance of this background on children's development), these results reinforce "the need for more research on individual differences among low-income and minority families" (Mcgroder, 2000, p. 753), in this particular case about children's time use. More than looking for controlling variables in searching "pure effects" (Newcombe, 2003), it is important to understand the circumstances under which disadvantaged family exhibits particular behaviours or presents specific results (McGroder, 2000). As it is stated by Newcombe (2003), "including – rather than controlling – variables that affect real lives of families and children would permit the theoretically motivated study of how children develop" (p. 1052). In this case it seems that it exists empirical evidence that children's time use could function as mediator between maternal education and children's social skills. This hypothesis could be tested in future studies with a more deductive character and alternative modes of analysis like structural equation modelling (Newcombe, 2003). Confirming this hypothesis, it seems relevant to intervene in daily routines of children from disadvantaged groups.

One main objective of this study was precisely to contribute to the development of programs to promote children's social skills, where time use should be contemplated. Our literature review and the results presented seem not to leave doubts on the importance that children's time use have in the development of their social competence.

One main idea that seems very important is the need to proceed to a careful evaluation of children's routines. The strategies of direct instruction, modelling or role

playing, could not be efficient if, in the daily life, there are not moments for their practice, or even if, the context of the activity promotes behaviours opposite to those who are learned in the program. The use of the time diary could give important indications about children's daily routine and about the more important time use areas who justifies some intervention.

Results from this study permits to conclude that a time use intervention in order to increase social competence should be essentially based in two specific areas: an increase of time spent with parents and/or with adult supervision, and to promote more structured routines and activities. Thus, children will spend less time in outdoor unstructured activities and without adult supervision.

One possible solution can be to actively promote children's participation in structured leisure activities (for instance: boy-scouts, a sport activity). These seem to be structured contexts, of peer interaction, and with adult supervision and which can supply to the parents excuses for a higher involvement in their children's life (Fletcher, et al, 2003). For that propose, it should be important to make an exhaustive analysis of the resources of the community, and instruct children and their families about the possibilities they have.

One other intervention strategy could be to identify and to mobilize the social nets of the family: widened family, neighbours, friends, parent's colleagues of work. Perceiving the importance of the weekend to children's development, the promotion of social events with the social net of the family could be an interesting way to promote social competence on children. In the meeting between adults, child could find some peers to interact – the children of other adults. Thus it will be assured the presence and supervision of the adults and, at the same time, the interaction with peers is made possible. This strategy could be implemented on two ways:

- in a direct, if necessary instrumental, support in the promotion of these events (a barbecue with friends, a contest of popular games, an excursion,…);

- giving support and incentive to associative participation, making families become involved in more or less formal organizations (associations of inhabitants, youth groups, cultural and sports groups,...).

The solution will not pass necessarily for taking off the children from the outdoors and placing them inside their home, even because, as Jutras states (2003) "the

spaces adjacent to house have a great potential to the development of personal identity and self esteem (…) and children who can not play outdoors are more dependents, have less motor abilities and are less competent on daily activities" (p. 258). What really matters is to add supervision and structure (with concrete proposals of activities and accomplishment of projects and goals) to these outdoor moments. Indeed, the "fundamental question is how to create activities with enough structure to contain and channel behaviour without compromising youths' sense of agency" (Larson, 2001, p. 163).

Assuming however that, particularly in the urban contexts, it will be difficult to oppose the phenomenon of "an increasing number of families directed toward inside their houses in what it respects to their free times" (Pinto, 2000, p. 151) it could be important to find, instruct, and give families solutions of active leisure inside their homes, in an attempt to oppose the great amount of time spent in activities of passive leisure.

During the week days, the promotion of extra-curricular activities in the school, namely the organizations of thematic clubs, beyond supplying children with new and richer experiences, they can also have the effect of making them more involved in active activities when at home. In fact, these activities have a great potential to reduce juvenile delinquency and early school drop-out and are associated to better grades at school, being particularly important in children at risk of school failure (Cosden et al, 2004; Mahoney, 2000).

More studies about children's time use, and specifically about Portuguese children, should be important to understand how our children are growing up, and to define more objective measures to promote their development.

References

Barton-Arwood, S., Murrow, L., Lane, K. & Jolivette, K. (2005). Project IMPROVE: Improving teachers' ability to address students' social needs. *Education & Treatment of Children, 28*, 430-443.

Fletcher, A., Nickerson, P., and Wright, K. (2003). Structured leisure activities in middle childhood: Links to well-being. *Journal of Community Psychology, 31*, 641-659.

Gresham, F. (2002). Social skills assessment and instruction for students with emotional and behavioral disorders. In Lane, Gresham, & O'Shaughnessy (Eds.), *Interventions for children with or at risk for emotional and behavioural disorders.* Boston: Allyn & Bacon. (242–258).

Gresham, F. & Elliot, S. (1990). *Social skills rating system: Manual*. Circle Pines, MN: American Guidance Service.

Gresham, F. & Elliot, S. (1984). Assessment and classification of children's social skills: A review of methods and issues. *School Psychology Review, 13*, 292-301.

Elliot, S. & Gresham, F. (1991). *Social Skills Intervention Guide*. Circle Pines, MN: American Guidance Service.

Hawkins, J., Guo, J., Hill, H., Battin-Pearson, S. & Abbott, R. (2001). Long-term effects of the Seattle Social Development School Bonding Trajectories. *Applied Developmental Science, 5*, 225–236.

Hofferth, S. & Sandberg, J. (2001). How American children spend their time. *Journal of Marriage and Family, 63*, 295-308.

Holland, A. & Andre, T. (1987). Participation in extracurricular activities in secondary school: What is known, what needs to be known? *Review of Educational Research, 57*, 437-466.

Jutras, S. (2003). Allez jouer dehors! Contributions de l'environment urbain au développement et au bien-être des enfants. *Canadian Psychology/Psychologie Canadienne, 44*, 257-266.

Lane, K., Barton-Arwood, S., Doukas, G., Munton, S., (2005). Designing, implementing, and evaluating social skills interventions for elementary students: Step-by-step procedures based on actual school-based investigations. *Preventing School Failure, 49*, 18-26.

Larson, R (2001). How U.S. children and adolescents spend time: What it does (and doesn't) tell us about their development. *Current Directions in Psychological science,10*, 160-164.

Larson, R. & Verma, S. (1999). How children and adolescents spend time across the world: Work, play, and developmental opportunities. *Psychological Bulletin, 125*, 701-736.

Lemos, M. & Meneses, H. (2002). A avaliação da competência social: versão portuguesa da forma para professores do SSRS. *Psicologia: Teoria e Pesquisa, 18*, 267-274.

Mahoney, J. (2000). School extracurricular activity participation as a moderator in the development of antisocial patterns. *Child Development, 71*,502-516.

Marinho, M. & Caballo, V. (2002). Comportamento anti-social infantil e seu impacto para a competência social. *Psicologia, Saúde & Doenças, 3*, 141-147.

McGroder, S. (2000). Parenting among low-income, African America single mothers with preschool-age children: Patterns, predictors, and developmental correlates. *Child Development, 71*, 752-771.

McHale, S., Crouter, A., & Tucker, C. (2001). Free-time activities in middle childhood: Links with adjustment in early adolescence. *Child Development, 72*, 1764-1778.

Newcombe, N. (2003). Some controls control too much. *Child Development, 74*, 1050-1052.

Osgood, D., Wilson, J., O'Malley, P., Bachman, J. & Johnston, L., (1996). Routine activities and individual deviant behavior. *American Sociological Review, 61*, 635-655.

Osgood, D., Andreson, A., (2004). Unstrucured socializing and rates of delinquency. *Criminology, 42*, 519-549.

Parke, R., & Buriel, R. (1998). Socialization in the family: Ethnic and ecological perspectives. In N. Eisenberg (Ed.). *Handbook of child psychology* (5th ed.), 463-552). New York: Wiley.

Pomerantz, E., Grolnick, W. & Price, C. (2005). The Role of parents in how children approach achievement: A dynamic process perspective. In Andrew J. Elliot & Carol S. Dweck (Eds). *Handbook of Competence and Motivation*. Guilford Press. 259-278.

Pinto, M. (2000). *A Televisão no Quotidiano das Crianças*. Edições Afrontamento. Porto.

PSID (2004). Panel Study of Income Dynamics Website. Retrieved Mars, 21, 2004 from http://psidonline.isr.umich.edu/.

PSID-CDS (2003). Time Diary Activity Book. Retrieved on January, 12, 2004, from the Panel Study of Income Dynamics web site: http://psidonline.isr.umich.edu/CDS/Codebooks/2003codebook.pdf.

Teixeira, V. (2004). *O dia a dia das crianças portuguesas – seu significado desenvolvimental*. Dissertação apresentada na Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, para obtenção do grau de Mestre em Psicologia, Especialização em Intervenção Psicológica com Crianças e Adolescentes.

Teixeira, V. & Cruz, O. (2005). Escolaridade da mãe, desempenho escolar e uso do tempo num grupo de crianças com 8 anos de idade. In J. Bairrão (Coord.). *Desenvolvimento: Contextos Familiares e Educativos* (pp. 284-308). Porto: Livpsic.