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THE RELATIONSHIPS BETWEEN SOCIAL INTELLIGENCE, SOCIAL COMPETENCE AND ABSTRACT INTELLIGENCE – A STUDY OF VALIDITY WITH PORTUGUESE GIFTED AND NON GIFTED CHILDREN

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ABSTRACT

The present work is focused on the description from relationships between social intelligence and social competences in gifted and non-gifted children and their relationship with abstract intelligence.

Based on a study with Portuguese children, 369 are non-gifted children from regular class and 32 were gifted children, we applied: Cognitive Test of Social Intelligence for Children (PRPI-6/11; Candeias *et al.,* 2008), Social Competence Test for Children (PACS-6/11, Candeias *et al.,* 2008) and Coloured Progressive Matrices (CPM, Raven, 1965); we examined the relathionships between Social Intelligence dimensions (Interpersonal Problem Solving, Familiarity, Motivation and Self-confidence), Social Competence and Abstract Intelligence.

These findings allow a more specific and significant way to assess and to identify social intelligence and its relationships with social competences and abstract intelligence, and are one way to promote a new look at human abilities and social competence, specially for assessment and intervention with gifted children in educational contexts.

Key words: Social intelligence; Social competence; Abstract intelligence; Gifted children; Educational contexts.

INTRODUCTION

Recent summary research produced by the National Association for Gifted Children and the National Research Center on the Gifted and Talented (USA) showed that high ability youth are generally, at least, as well adjusted as any other students (Reis & Renzulli, 2004; Neihart, Reis, Robinson, N. & Moon 2002) although they are likely to face sources of risk to their social-emotional development. The assessment of emotional and social functioning could support program planning in order to prevent and develop abilities and competences to cope with such risk. This work is focused on the description of social intelligence and its relationships with social competences in gifted and non gifted children and their relationship with abstract intelligence. Such analysis will allow us to identify more specific and significant ways to assess and to identify children's socio-emotional cognitive process characteristics in general, and in gifted children particularly, and could improve a new approach to look at human abilities and socio-emotional competence.

Gifted and talented children and youth can often face a number of situations that constitute sources of risk if their needs are not met (Candeias, 2004), as: (i) issues deriving from their academic achievements as compared with their peers; (ii) common psychological responses to talents, as underachievement and perfectionism; and (iii) their dual identification as having a learning disability or attention deficit and also having talents and gifts (Pérez, 2000; Candeias, 2005; Candeias et al., 2008a; Neihart et al., 2002; Reis & Renzulli, 2004).

This means studies of social intelligence are becoming increasingly important if one wants to understand the individuals' knowledge, thinking and behavioral processes (Kihlstrom & Cantor, 2000; Candeias, 2004). The performance of individuals on every task, clearly, involves, at the same time, types of mental processes (reasoning, memory, perception, creativity) as well as types of contents of the task to be performed (verbal, numerical, spatial, figurative, social, emotional).

Thus it is important, to assume a theoretical work, supported by socio-cognitive approaches to cognition and behavior. So, the Social Intelligence and the Social Competence constructs are defined as complementary constructs which allows us to conceptualize the interaction amongst vast psychological categories (*e.g.*, Ford 1995; Candeias, 2007, 2008; Greenspan & Driscoll, 1997; Mayer, Salovey & Caruso, 2000). In this context, the social intelligence construct can be understood through two dimensions: cognitive and behavioral (*e.g.*, Candeias, 2007; Candeias et al., 2008b; Jones, & Day, 1997; Wong, Day, Maxwell & Meara 1995). Although some recent studies have demonstrated a multidimensional nature of social intelligence, they provide no theoretical rationale for its distinct aspects. Still, another recent study (Candeias, 2001; 2007; Candeias et al, 2008b) provides empirical support to distinguish between several dimensions of the cognitive facet of social intelligence: skills for social ill/well structured problem solving and metacognitive skills for social problem solving. This study, developed with adolescents, found that the social cognitive process operates with different kinds of features and strategies, suggesting its selective use in relation to task- situation characteristics.

Given the importance of a careful understanding of psychological human complexity, we elected to focus on the role of cognition in socially intelligent behavior by examining two different dimensions of social intelligence – Cognitive and Behavioral – as a way of supporting a theoretical rationale leading to a more reliable understanding of social behavior and social cognition complexity. The Cognitive Dimension focuses on the cognitive process and contents underlying interpersonal problem solving, and the Behavioral Dimension focuses on social effectiveness in social situations.

This conceptualization about social intelligence, as well as, social competence, would support the understanding of new proposals of psychological assessment about it, based on a socio-cognitive approach to gifted an non-gifted students (Candeias et al., 2008a).

In summary, our study examined the way in which Social Intelligence dimensions (Interpersonal Problem Solving, Familiarity, Motivation and Self-confidence) and Abstract Intelligence are related to Social Competence in gifted and non-gifted children.

METHOD

Participants

All participants were Portuguese children, 369 are non-gifted children from regular class (189 girls and 180 boys, with the average age of 8.64 years, SD = 9.32) and 32 were gifted children (7 girls and 25 boys, whose average age was 10.9 years, SD = 2.92), identified within special educational teams. The study was conducted from April to June, 2007.

Procedure

The administration of the tests took place during a single fifty-minute session during lesson hours and in the presence of the researcher. Responses to the questionnaires were provided on a total voluntary basis, after the authorization of parents. Collected data are analyzed through SPSS.

Instruments

–Test of Interpersonal Problem Solving (PRP-I-6/11; Candeias *et al.,* 2008):

Social Intelligence dimensions were measured by means of the PRP-I-6/11. The participants are expected to analyse an interpersonal problem-situation (in a pictorial format), in three major dimensions: *Interpersonal Problem Solving* (SI-PS), which is evaluated through a questionnaire in which the participants are requested to *percept and describe* the interpersonal situation, to *point out the main features* from the situation that contribute to understand the situation, to *point out one or more solutions* for that interpersonal problem, and to *choose the best solution and justify it*; *Familiarity or Experience* (SI-E) in similar situations, to evaluate on a 1-to-5 Likert scale, in which 1 is "Never happens" and 5 is "Always happens"; *Motivation and Self-confidence* (SI-M) toward this kind of interpersonal situation, evaluating on a 1-to-5 Likert scale, that ranges from "I strongly disagree" (1) to "I strongly agree" (5). The test has great validity of construct, proved by confirmatory factorial analyses, in which the multidimensionality of the questionnaire is shown (Candeias, 2007). Candeias et al. (2008b) found an internal consistency of .93 for *Interpersonal Problem Solving*, .78 for *Motivation and Self-confidence*, and .72 for *Familiarity or Experience*.

- Social Competence Test for Children (PACS-6/11, Candeias *et al.,* 2008):

Social Competence was measured by means of the PACS-6/11. The participants are expected to analyse five interpersonal problem-situations (in a verbal format), in which the participants are requested to *self-evaluate social competence performance and facility* on a 1-to-3 Likert scale, in which 1 is "Poor" and 3 is "Excellent". Candeias et al. (2008) found an internal consistency of .82 for PACS-6/1, and points out a interpretation based on the multidimensionality of the questionnaire, based on analysis of the validity of construct, proved by factorial analysis, namely children perceptions of: Performance in Social Situations (CPPSS); Communication with Adults (CPCA); Communication with Parents (CPCPa), Communication with Peers (CPCPe), and Facility in Social Situations (CPFSS).

– Coloured Progressive Matrices (CPM, Raven, 1965):

Abstract intelligence (AI) was measured by CPM. The participants are expected to solve 36 items (3 series), choosing the correct solution among 6 options. We've used the Portuguese adaptation (Simões, 2000), with an internal consistency of .89.

Results and discussion

A correlation analysis was carried out to determine if Social Intelligence dimensions (Interpersonal Problem Solving, Familiarity, Motivation and Self-confidence) and Abstract Intelligence are related to Social Competence in gifted and non-gifted children (see Table 1 and 2).

Table 1. Correlations of the studied variables in the group of non-gifted children. (Notes: * p<.05; ** p<.01, (2-tailed)

	LP	M	Sc	AI	SI-PS	SI-E	SI-M	CPPSS	CPCA	CPCPa	CPCPe	CPFSS
LP	1	,780(**)	,809(**)	,154(**)	,109(*)	-,052	,043	,096	,046	,130(*)	,041	,080
M	,780(**)	1	,808(**)	,216(**)	,059	,015	,067	,073	-,001	,088	,006	,081
Sc	,809(**)	,808(**)	1	,219(**)	,111(*)	-,056	,050	,110(*)	,058	,090	,061	,095
AI	,154(**)	,216(**)	,219(**)	1	,057	-,050	,097	,018	,006	,039	-,015	,048
SI-PS	,109(*)	,059	,111(*)	,057	1	-,173(**)	-,081	,024	,017	-,017	,072	-,044
SI-E	-,052	,015	-,056	-,050	-,173(**)	1	,204(**)	,191(**)	,171(**)	,218(**)	,090	,205(**)
SI-M	,043	,067	,050	,097	-,081	,204(**)	1	,183(**)	,110(*)	,201(**)	,090	,219(**)
CPPSS	,096	,073	,110(*)	,018	,024	,191(**)	,183(**)	1	,657(**)	,589(**)	,646(**)	,720(**)
CPCA	,046	-,001	,058	,006	,017	,171(**)	,110(*)	,657(**)	1	,410(**)	,435(**)	,694(**)
CPCPa	,130(*)	,088	,090	,039	-,017	,218(**)	,201(**)	,589(**)	,410(**)	1	,329(**)	,620(**)
CPCPe	,041	,006	,061	-,015	,072	,090	,090	,646(**)	,435(**)	,329(**)	1	,630(**)
CPFSS	,080	,081	,095	,048	-,044	,205(**)	,219(**)	,720(**)	,694(**)	,620(**)	,630(**)	1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 2. Correlations of the studied variables in the group of gifted children. (Notes: * p<.05; ** p<.01, (2-tailed).

	LP	M	Sc	AI	SI-PS	SI-E	SI-M	CPPSS	CPCA	CPCPa	CPCPe	CPFSS
LP	1	,680(**)	,707(**)	-,211	-,489(**)	-,331	,098	,078	,135	-,151	,128	-,103
M	,680(**)	1	,237	-,298	-,329	-,485(**)	,211	,440(*)	,334	,203	,271	,229
Sc	,707(**)	,237	1	,120	-,375	-,180	-,235	-,158	,048	-,391(*)	,079	-,265
AI	-,211	-,298	,120	1	,115	,073	-,077	-,172	,129	-,082	,110	,033
SI-PS	-,489(**)	-,329	-,375	,115	1	,261	,008	,041	,137	,373(*)	,150	,366(*)
SI-E	-,331	-,485(**)	-,180	,073	,261	1	,090	-,110	-,205	,205	,076	,101
SI-M	,098	,211	-,235	-,077	,008	,090	1	,469(**)	,353(*)	,388(*)	,358(*)	,385(*)
CPPSS	,078	,440(*)	-,158	-,172	,041	-,110	,469(**)	1	,591(**)	,714(**)	,687(**)	,698(**)
CPCA	,135	,334	,048	,129	,137	-,205	,353(*)	,591(**)	1	,484(**)	,617(**)	,650(**)
CPCPa	-,151	,203	-,391(*)	-,082	,373(*)	,205	,388(*)	,714(**)	,484(**)	1	,643(**)	,816(**)
CPCPe	,128	,271	,079	,110	,150	,076	,358(*)	,687(**)	,617(**)	,643(**)	1	,664(**)
CPFSS	-,103	,229	-,265	,033	,366(*)	,101	,385(*)	,698(**)	,650(**)	,816(**)	,664(**)	1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The analysis of table 1 and 2, indicates that cognitive dimension of Social Intelligence (SI-PS, SI-M, SI-E) aren't correlated with abstract intelligence (AI), in both groups (non-gifted/gifted), as if interpersonal problem solving depends from other cognitive abilities beyond the abstract thinking.

Social competence is correlated - positively significant – with two dimensions of Social Intelligence: Experience and Motivation in Social Situations (SI-E and SI-M), in non gifted group and only with

Motivation in gifted group. These results suggest that in non gifted group social competence is improve by motivation and experience in interpersonal situations, but in gifted children that only depends from motivation. Consequently, gifted children only improve their social competences if they are motivated for that.

In the group of gifted children there is a significant positive correlation between Social Intelligence: Problem Solving (SI-PS) and Social Competence: Children Perceptions of Communication with Parents (CPCPa), as if the positive perception about communication with parents improve the aptitude to solve interpersonal problems in non gifted group, suggesting that parents could be important agents of social competence for non gifted children but not necessarily with gifted children.

Furthermore Social Intelligence: Problem Solving (SI-PS) presents positive and significant relationship with Academic Performance in Portuguese Language (LP) and Sciences in non gifted group. In gifted group we observed a negative and significant relationship between Social Intelligence: Problem Solving (SI-PS) and Academic Performance in Portuguese Language (LP), and between Social Intelligence: Experience (SI-E) and Mathematics (M).

These data suggest different kinds of appropriation of school learning and experience between gifted and non gifted groups, as if the facility to solve interpersonal problem is associated with different kinds of thinking developed in academic settings (e.g., verbal comprehension and practical thinking) in non gifted group, but not in gifted group.

CONCLUSIONS

The main conclusions in this study are:

- Social Intelligence (SI-PS, SI-M, SI-E) aren't correlated with abstract intelligence (AI), in both in children with different kind of cognitive characteristics (non-gifted/gifted), as if interpersonal problem solving depends from other cognitive abilities beyond the abstract thinking as we suggest in previous theoretical am empirical studies (Candeias, 2001, 2004, 2008).

- Social competence is correlated Social Intelligence differently. Results indicated a different relationship between Experience and Familiarity with social situations and Social competence, as if in non-gifted children the experience with social tasks constituted an important way to develop social competences, but not in gifted children. Maybe this occurs because they prefer intellectual activities as we have already pointed out and other studies have shown (Brown, 2006; Candeias, 2004, 2005; Neihart et al., 2002). Consequently, this data suggest that gifted children will improve their social competences only if they are motivated for that. Furthermore it seems that positive perceptions about communication with parents improve the aptitude to solve interpersonal problems in non gifted group, suggesting that parents could be important agents of social competence for non gifted children but not with gifted children.

- Another interesting consequence of this study suggest different kinds of appropriation of school learning and experience between gifted and non gifted groups, indicating that facility to solve interpersonal problem is associated with different kinds of thinking developed in academic settings (e.g., verbal comprehension and practical thinking) in non gifted group, but not in gifted group, maybe because gifted children prefers intellectual issues (Brown, 2006; Candeias, 2004, 2005; Neihart et al., 2002).

Finally, we could suggest several implications for psychological assessment and intervention based on this discussion. First, they provide foundations for developing differential norms for standardized assessment instrument of social intelligence and competences, which enables more reliable and ecologically valid tools for children with different kind of cognitive functioning.

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