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The Matson Evaluation of Social Skills with You (MESSY) and its Adaptation for Brazilian children and ado

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Abstract

The present study reports the psychometrics properties of the adaptation of the Matson Evaluation of Soc Youngsters (MESSY) to a Brazilian sample. The MESSY and the Family Identification Test (FIT) were conchildren (215 females, 167 males) from urban middle-class areas and favelas (slams) of Belo Horizonte, Brazifrom 7 to 15 years (M=10.30; SD=2.24). Results from factor analysis yielded a four-factor model with good interfone-Way Anova analyzes described boys as having higher scores on Factor 1 than girls (Aggressiveness/Antison Children from urban middle-class areas performed better on factor 2 (Social Skills/Assertiveness) than thos Socio-cultural implications of the results are discussed.

Keywords: Children (Brazil); adolescents; social skills.

Escala Matson de Avaliação das Habilidades Sociais para Jovens (MESSY) e sua Adaptação para Crianças e Adolescentes Brasileiros

Resumo

O presente estudo descreve as propriedades psicométricas da adaptação da *Matson Evaluation of Soc Youngsters* (MESSY) para uma amostra brasileira. A MESSY e o Teste de Identificação Familiar (FIT) forar por 382 crianças (215 meninas, 167 meninos) de áreas urbanas de classe média e favelas de Belo Horizonte, variou de 7 a 15 anos (*M*=10.30; *DP*=2.24). Resultados da análise fatorial produziram um modelo com quatro f consistência interna. Análises de Variância *One-Way* mostraram que os meninos possuem escores superiore das meninas (*Agressividade/Comportamento Anti-social*). Crianças provenientes de áreas urbanas de classe m uma melhor performance no fator 2 (*Habilidades Sociais/Assertividade*) do que aqueles das *favelas*. Imp culturais dos resultados são discutidas.

Palavras-chave: Crianças (Brasil); adolescentes; habilidades sociais.

Social skills are a fundamental factor for the formation of relationships, for the quality of social interactions and even for the individual's mental health (Hay, 1994; Parker & Asher, 1987). Such skills can be defined as the complete pattern of behaviors showed by an individual during his/her interpersonal relations. In this sense, adaptive social behavior is a complex

from others (parents, teachers, etc.) ab son likes to play with other boys") or (e.g. I like to play with other boys.). A used self-report scale to measure socia Evaluation of Social Skills with Yo developed by Matson, Rotatori and H which factorial structure best explains the data because the results of former studies showed a different number of factors and different arrangements of items.

Thus, the objectives of the present study are to examine the psychometric properties of the MESSY for the first time in Latin America, i.e. in a Brazilian sample and to compare the results to foregoing studies with the MESSY in other socio-cultural contexts. Moreover, it will investigate the differences of social skills in children from urban middle-class areas and *favelas* (slams).

Materials and Methods

Sample

The sample included 382 children (215 females, 167 males) from four public schools in urban middle-class areas of Belo Horizonte, the third largest city in Brazil (3.5 million). 234 children were from schools A and B, located in urban middle-class areas (96 males and 138 females), and 148 children were from schools B and C, sited in so-called *favelas* (71 males and 77 females). Age ranged from 7 to 15 years (*M*=10.30; *SD*=2.24). The demographic composition of the sample is shown in Table 1.

Instruments

The Matson Evaluation of Social Skills with Youngsters (MESSY) is a self-report measure developed by Matson, Rotatori and Helsel (1983). The scale consists of 62 items, which are rated by the child or adolescent according to a five-point Likert scale. The items are related to 6 factors/dimensions originally named 'Appropriate Social Skill', 'Inappropriate Assertiveness', 'Impulsive/Recalcitrant', 'Overconfident', 'Jealousy/Withdrawal' and 'Miscellaneous Items' (rest of the items difficult to classify).

The MESSY was translated into Portuguese by three native speakers. Subsequently this version was modified by two other Brazilians in order to achieve a better understanding by persons with lower levels of formal education, while at the same time, retaining the original meaning of the items.

The Family Identification Test (FIT; Remschmidt & Mattejat, 1999) is an instrument that was developed in Germany

anxious, moody, nervous, content, calm, liv understanding, respectful, friendly) derive personality concepts: 'Social Activity', 'As Resonance' and 'Emotional Stability/Lab has to describe him/herself (real self), ho to be (ideal self), and subsequently the closer social context characterized as 'sig her parents, a best friend of him/her and h item has to be evaluated in reference to the along to a Likert scale ranging fro corresponding) to five (corresponding correlations between the real and ideal s congruence. The identification patterns are through the correlation between the des person and the real self (real identification Previous studies with the FIT had sho discriminate clinical from non-clinical po-1998) as well as its successful adaptation t (Teodoro, 2000).

Procedure

After contacting the schools the au background of the study to the teachers students were informed about the proje confirmation letter, which had to be sign

The children, who were authorized to study, completed the self-report vers: Evaluation of Social Skills with Youngster Family System Test (FIT) individually, we one of the authors who was ready to answer of any doubt.

Results

In the current study, as the first step exploratory factorial analysis was condut the most appropriate dimensional structures set. Next, the model found was submitted factorial analysis based on its covariance to an analysis of internal consistence. The results were compared with personality identification patterns obtained using the

Exploratory Factor Analysis

Exploratory factor analysis was performed using the principal components method (PCA) and Oblimin rotation with the Statistical Program for Social Sciences (SPSS 8®). As the most widely used criterion to determine the number of factors the scree plot method was chosen (Cattel, 1966).

The items and their loadings, and the variance explained by each factor are shown in Table 2. The result of the Kaiser-Meyer-Olkin measure of sampling adequacy was .827, indicating appropriateness of the factor analysis.

The initial results suggested a four factor solution that explained 29.7% of the total variance. A set of six items showed saturation lower than .30 (Item 08 and 62 from the first factor, Item 01 and 58 from the second factor and items 10 and 54 from the fourth factor). Nevertheless these items were maintained in the model in order to retain the possibility for international comparison.

The first factor explained 13.6% of was named 'Aggressiveness/Antisocial factor, 'Social Skills/Assertiveness', of variance. The third factor, 'Conceit/Fa. 3.5% of the variance and the last factor Social Anxiety' explained another 3.25%.

Correlations Among the MESSY

The correlations among the four Table 3. There are three significant c of p< .01: between factors 1 and 3 .36;) and between factors 3 and 4 (r= significant difference at the level between factors 2 and 4 (r= .12; p< possible associations were not confactor 2 with factor 1 and with factor

Table 2
Items of the MESSY and their Distribution to Factors after Oblimin Rotation

Items		I
	1	2
Factor 1: Aggressiveness/Antisocial Behavior		
41. I speak too loudly.	.656	
35. I am stubborn.	.618	
30. I make fun of others.	.607	
06. I speak (interrupt) when someone else is speaking.	.593	
53. I get into fights a lot.	.586	
22. I pick on people to make them angry.	.570	203
07. I take or use things that are not mine without permission.	.558	
11. I slap or hit when I am angry.	.522	
39. I make sounds that bother others (burping, sniffling).	.508	
21. I lie to get something I want.	.502	
17. I pick out other children's faults/mistakes.	.491	
02. I threaten people or act like a bully.	.478	
05. I gripe or complain often.	.445	
14. I give others children dirty looks.	.444	
38. I think that people are picking on me when they are not.	.435	
04. I am bossy (tell people what to do instead of asking).	.428	
19. I break promises.	.413	
29. I hurt others' feelings on purpose (I try to make people sad).	.398	
61. I hurt others when teasing them.	.378	
03. I become angry easy.	.316	
62 I want to get even with someone who hurts me	.289	

ARTICULOS | PS

MAYCOLN LEÔNI MARTINS TEODORO, KARL CHRISTOPH KÄPLER, JUSSARA DE LIMA RODRIGUES, PATRÍCIA MARTINS DE FREITAS & Table $\,2.$

Items of the MESSY and their Distribution to Factors after Oblimin Rotation (continuation)

Items		Factors		
	1	2	3	
28. I know how to make friends.		.458		
16. I feel happy when someone else does well.		.453		
46. I ask questions when talking with others.		.450		
50. I feel sorry when I hurt someone.		.444	225	
20. I tell people they are look.		.437		
23. I walk up to people and start a conversation.	.230	.434		
47. I see my friends often.		.422		
42. I call people by their names.	229	.402		
40. I take care of other's property as if it were my own.		.388		
37. I show my feelings.		.387		
27. I keep secrets well.		.361		
52. I join in games with others children.		.333	.243	
09. I look at people when I talk with them.		.322		
58. I explain things more than I need to.		.262		
01. I make other people laugh.		.257		
Factor 3: Conceit/Haughtiness				
45. I try to be better to every one.			.639	
60. I think that winning is everything.			.634	
33. I think I know it all.			.601	
18. I always want to be the first.			.578	
51. I like to be the leader.			.536	
15. I feel angry or jealous when someone else does well.			.505	
36. I act like I am better than other people.	.348		.454	
57. I stay with the others too long (wear out ma welcome).			.336	
Factor 4: Loneliness/Social Anxiety				
49. I feel lonely.				
48. I play alone.			.206	
25. I like to be alone.				
26. I am afraid to speak to people.	.258			
10. I have many friends.		.276		
54. I am jealous of the others people.	.251		.233	

Table 3

Correlations among the MESSY Factors in the Brazilian Sample

Correlations among the MESSI Pactors in the Brazilian Sample			
MESSY Factors	Aggressiveness/	Social Skills/	Conceit/
	Antisocial Behavior	Assertiveness	Haughtiness
Aggressiveness/Antisocial Behavior	-		
Social Skills/Assertiveness	091	-	
Conceit/Haughtiness	.541**	.043	-
Loneliness/Social Anxiety	.357**	.124*	.333**

Byrne, 1989; Carmines & McIver, 1981). The model and its standardized values are shown in Figure 1.

Before the final evaluation of the Model's fit, it is important to underscore to some results shown in Figure 1. First, the paths from the latent to the manifest variables showed high scores, meaning that the latent variable could explain a high percentage of variance related to manifest scores. The error measures, however, showed small contributions to manifest variables.

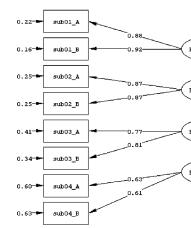
In sum, the results confirmed the hypothesis that the four-factor model provides a good fit with the data set. The chi-square (X^2) was 48.03 with 18 degrees of freedom. Goodness of fit was highly confirmed (RMSEA= .065; GFI= .97 and AGFI= .94).

Reliability

The reliability of the scale was calculated by the internal consistency coefficients (Cronbach's alpha). The total alpha was .85. The first factor (*Aggressiveness/Antisocial Behavior*) represented an alpha of .87, factor 2, *Social Skills/Assertiveness*, showing an alpha of .84. The third factor, *Conceit/Haughtiness*, is characterized by an alpha of .74 and the last factor, *Loneliness/Social Anxiety*, showed an alpha of .47.

Correlation with the Family Identification Test (FIT)

Table 4 displays the Pearson correlations between the four factors of the MESSY and the results obtained by the Family Identification Test (FIT). There are many significant associations between the two instruments, especially with factor 1 of the MESSY (Aggressiveness/Antisocial behavior), which is (negatively) correlated with almost all indicators of the FIT on the self-concept, identification and personality dimension level. There are also positive correlations between factor 2 (Social Assertiveness) and the FIT's social activity and social resonance dimension (p<.001) as well as with real identifications towards mother and best friend (p<.05). Factor



Chi-Square=48.03, df=18, P-v Figure 1. Confirmatory Factor A Factor MESSY and Standardized F

3 (Conceit/Haughtiness) is also con identification patterns towards signi congruence, as well as (positively) to dimension, whereas factor 4 (Loneline not show any link to FIT variables.

In summary, the total score of the associations with the FIT's dimension emotional lability as well as with se identification towards mother and best

Gender, Age and different school er

Analyses of Variance (Anova) wi Tests were conducted in order to a regarding gender, age and school significance was defined as p<.01. To and standard deviations for the four differentiated by gender and school er

Concerning gender differences, the statistically significant result found, inc

Table 4
Correlations between the MESSY Factors and the Family Identification Test (FIT)

Family Identification Test (FIT)

Aggressiveness/ Social Skills/ Conceit/ Loneline

Antisocial Rehavior Assertiveness Haughtiness Social Anxi-

Table 5 Means and Standard Deviations for the four Factors of the MESSY Differentiated by Gender and Scho

Factor 1:	Urban middle-class areas	Favelas
Aggressiveness/Antisocial Behavior		
Male	20.54 (6.76)	20.13 (8.19)
Female	18.46 (5.58)	17.39 (5.01)
Total	19.31 (6.17)	18.7 (6.84)
Factor 2: Social Skills/Assertiveness		
Male	50.01 (6.83)	48.18 (9.50)
Female	52.55 (6.74)	48.84 (8.20)
Total	51.54 (6.87) ^b	48.53 (8.82) b
Factor 3: Conceit/Haughtiness		
Male	8.3 (3.47)	8.83 (3.64)
Female	7.59 (2.76)	7.91 (2.94)
Total	7.88 (3.09)	8.35 (3.32)
Factor 4: Loneliness/Social Anxiety		
Male	9.07 (2.05)	8.13 (2.18)
Female	8.93 (1.94)	8.54 (2.30)
Total	8.99 (1.99)	8.34 (2.25)

Note. Male scored significantly higher on fator 1 than females (p<.001). Children from urban middle-class area higher on fator 2 than children from favelas (p < .001).

girls on factor 1, Aggressiveness/Antisocial Behavior, (T= -2.846; p < .001) in comparison to boys. In reference to the other three factors there no statistically relevant differences were found.

Similarly, Anova with age groups did not show any significant results in relation to MESSY dimensions. The results referring to school context did not show any difference between schools A and B and between schools C and D. Thus, it was decided to group schools A and B (children living in urban middle-class areas) and schools B and D (children living in favelas) together. The analysis of these two groups showed a significant difference on factor 2 - Social Skills/Assertiveness - (T=4.203; p<.001), in which the children from middle-class neighborhoods scored higher than the children living in favelas. Moreover, no other significant difference was found relating to factors 1 (Aggressiveness/Antisocial Behavior), 3 (Conceit/Haughtiness) and 4 (Loneliness/Social Anxiety).

Univariate Analyses with these variables (sex, age and different schools) were also performed. The results showed

no significant interactions among these variables.

factors, even when they were named diffe there is a similarity among factor 3 as for

In their paper they did not mention the pe

explained. Spence and Liddle (1990) found

factors, which explained 77% of the variar the similarities between the two first factor

and North American model, the authors of

original model with five factors. In the stu

also the principal component method wi

and the criterion of Kaiser to determine th

to the Latin cultural context with the tran

(Méndez, Hidalgo, & Inglés, 2002) and

the current study). The findings of both stud

factor solutions, which are characterized

account for, approximately, the same a

explained (33.28% and 29.7% respective

the method used to define the appropriat

was the scree plot in contrast to the form

reveals that all studies found approximatel

The global analysis of factorial structu

The most recent studies were an adapt

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Table 6 Comparison of MESSY Factor Structure among Different Studies

Authors	Factor structure	Item numbers
Matson, Rotatori & Helsel	Factor 1: Appropriate Social Skills	9, 10, 12, 13
(1983)		31, 32, 34, 3
from the U.S.		50, 52, 55, 56
	Factor 2: Inappropriate Assertiveness	2, 7, 11, 14, 1
		39, 41, 53, 60
	Factor 3: Impulsive/Recalcitrant.	3, 4, 5, 6, 35
	Factor 4: Overconfident	8, 33, 36, 57,
	Factor 5: Jealousy/Withdrawal	15, 38, 49, 5
	Miscellaneous Items	1, 18, 25, 26,
Spence & Liddle (1990)	Factor 1: Appropriate Social Skills	9, 12, 13, 16
from Australia		31, 32, 34, 3'
		47, 50, 52, 53
	Factor 2: Aggressive/Antisocial	2, 3, 4, 5, 6,
		18, 21, 29, 30
	Factor 3: Overconfident/Competitive	18, 33, 36, 45
	Factor 4: Loneliness/Hostility	22, 38, 41, 48
	Factor 5: Friendship	10, 28, 52
	Factor 6: Miscellaneous	23, 54, 61
	Factor 7: Cruelty/Social Anxiety	19, 26, 29, 30
	Items deleted from the scale	1, 25, 39, 57,
Méndez, Hidalgo, & Inglés	Factor 1: Aggressive/Antisocial Behavior	2, 3, 4, 5, 6,
(2002)		19, 21, 22, 29
from Spain		41, 53, 54, 58
	Factor 2: Social Skills/Assertiveness	1, 9, 10, 12, 1
		28, 31, 32, 34
		46, 47, 50, 52
	Factor 3: Conceit/Haughtiness	18, 33, 36, 4
	Factor 4: Loneliness/Social Anxiety	10, 25, 26, 28
Teodoro et al. (current study)	Factor 1: Aggressive/Antisocial Behavior	2, 3, 4, 5, 6,
from Brazil		21, 22, 29, 30
		61, 62
	Factor 2: Social Skills/Assertiveness	1, 9, 12, 13, 1
		31, 32, 34, 3
		47, 50, 52, 53
	Factor 3: Conceit/Haughtiness	15, 18, 33, 30
	Factor 4: Loneliness/Social Anxiety	10, 25, 26, 4
		-, -, -,

5, which are present only in the first study, showed Eigenvalues of 1.91, 1.18 and 1.09 respectively. This could be - as an alternative to the hypothesis of cultural differences - another explanation for the variation of factor numbers in these studies.

The model with four factors was v factorial analysis carry out in Lisrel. T fit showed that it is an appropriate mode of the Brazilian study sample. Mo Méndez, Hidalgo and Inglés (2002). Only the original study (Matson, Rotatori, & Helsel, 1983) did not find any gender differences. Related to age the results showed an inconsistent pattern among the studies with the MESSY. While the present study did not find any significant differences, the others found some covariations with age.

The present study also investigated different groups of children living in diverse social contexts (urban middle-class and very poor areas). The results revealed that children from middle-class neighborhoods scored higher on appropriate social behavior than children from favelas. The low scores in social behaviors indicate deficits in these children's behavior repertoire, which are probably due to psychosocial stress factors associated with poverty. The socio-economic conditions in which these children grow up generate a risk pattern for unstable family relationships, diseases, unemployment and, as a consequence, the children's circulation among different primary caretakers (Schmiedt Streck, 2000). Such constantly changing and complex living conditions can easily be imagined as offering fewer opportunities for adequate modeling processes in relationships and social interactions, what also contributes to a deficit in the acquisition of behaviors considered socially more adequate in these children (Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991).

As a final conclusion, the current study presented a successful adaptation of the Matson Evaluation of Social Skills with Youngsters (MESSY) to the Brazilian context. The results on psychometric properties are convincing and confirm the Spanish results from Méndez, Hidalgo and Inglés (2002). Subsequent studies are necessary to further evaluate the instrument itself (e.g. in terms of its temporal stability in longitudinal designed studies) as well as its application in different cultural and also clinical contexts.

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