Application of the Future Expectation Scale for Adolescents (FESA) in Brazil

Aplicação da Escala de Expectativas Futuras para Adolescentes (FESA) no Brasil

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Abstract

This exploratory study analyzed the factor structure of the Future Expectation Scale for Adolescents (FESA) in a Brazilian sample of emerging and young adults to determine its utility for research and clinical use in Brazil. The sample included 547 young adults, ranging from 18-29 years old (M= 22; SD = 3.9), from different socioeconomic status and 351 (64.2%) females. Results of Confirmatory Factor Analysis revealed that the original model found for the FESA did not fit the Brazilian sample well. Therefore, a subsequent Exploratory Factor Analysis was performed with the 24 self-reported FESA items. Results demonstrated a cohesive factor structure for the FESA, but the factor structure was different from the original. For instance, items belonging to the original factor 'Marriage and Family' loaded better with the original factor 'Children's Future,' which was renamed 'Children and Family.' The original factor 'Church and Community' was slightly different and was renamed 'Church' to be consistent with the Brazilian context. The factor structure of the FESA was consistent and the measure was found to be useful for further studies in this area.

Keywords: Factor structure, future expectations, adolescents, youth, emerging adults.

Resumo

Este estudo exploratório analisou a estrutura fatorial da Escala de Expectativas Futuras de Adolescentes (FESA) em uma amostra brasileira de jovens adultos (n= 547), 64,1% do sexo feminino, com idades entre 18 e 29 anos (M= 22; DP = 3,9), de diferentes níveis socioeconômicos, a fim de determinar a utilidade da escala para fins de pesquisa e aplicação clínica no Brasil. Resultados da Análise Fatorial Confirmatória revelaram que o modelo original do FESA não se adequou bem à amostra brasileira. Posteriormente, uma Análise Fatorial Exploratória foi realizada com os 24 itens do FESA. Os resultados mostraram que o FESA apresentou uma estrutura fatorial coesa, mas diferente da original. Por exemplo, itens que pertenciam originalmente ao fator 'Casamento e Família' carregaram mais satisfatoriamente no fator 'Futuro das crianças' que foi, então, renomeado como 'Crianças e Família'. O fator original 'Igreja e Comunidade' apresentou breves mudanças e foi renomeado como 'Igreja', a fim de harmonizar com o contexto brasileiro. A estrutura fatorial do FESA mostrou-se consistente e a medida foi considerada útil para futuras pesquisas nesta área.

Palavras-chave: Estrutura fatorial, expectativas futuras, adolescentes, juventude, adultos emergentes.

Young individuals' future expectations are an important focus of study because of their influence on important long term plans about the future including higher education, work opportunities, social and emotional adjustment at school, and self-perception of competence (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Seginer, 2000). Studies on future expectations employ diverse terms, such as future orientation (Seginer, 2000, 2008) and future expectations (McWhirter & McWhirter, 2008; Wyman, Cowen, Work, & Kerley, 1993). In the current study, the term 'expectation' will be used, and is defined as 'believing that something will happen' (Kernerman, 2007).

Ramos, Seidl-de-Moura, and Pessôa (2013) identified three central theoretical orientations relevant to the future goals of young people: (a) Future Time Perspective Theory, (b) Self-determination Theory, and (c) cognitive and neural processes related to the development of goals for the future. Future Time Perspective Theory investigates the current influence of future goals (Lens, 1993; Nuttin, 1983; Schmitt, 2010) and describes future expectations as (a) short-term, when individuals establish more immediate future goals (for example, "I will apply for a

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job tomorrow"); (b) extended, when individuals establish more distant future goals (for example, "I will find a job in the service industry as soon as I graduate from high school"); and (c) long-term, when individuals establish long term future goals, which will be pursued for years (for example, "One day I will own my own business"; Lens, 1993). Self-determination Theory investigates intrinsic and extrinsic motivations and the factors that promote these motivations (Deci & Ryan, 2000). Studies in the field of education highlight the role of the teacher in promoting intrinsic motivation, and the influence of intrinsic motivation in students' learning engagement, persistence, and use of educational strategies (Guimarães & Boruchovitch, 2004; Vansteenkiste, Soenens, Verstuvf, & Lens, 2009). Future Time Perspective Theory and Self-determination Theory overlap. For instance, one investigation concluded that individuals whose future goals present an intrinsic motivation are more autonomous and more persistent in taking actions towards their future goals (Vansteenkiste et al., 2009). The third theoretical orientation focuses on the similarities between cognitive and neural processes involved when stimulating thoughts about past and future goals (Ramos et al., 2013). Within this perspective, a study brought evidences that decision making under uncertainty and trial-by-trial feedback highly stimulates activity of the parietal lobule, what was dissociable from general attention in the brain (Vickery & Jiang, 2009). Using data of pupillary response, another study indicated that future-oriented people invested more cognitive resources and response accuracy than presentoriented people in reaction time, when exposed to items with a temporal orientation towards the future (Nowak, Milfont, & Van Deer Meer, 2013). Other research found that age-related changes in affective brain regions and circuitry can influence how people experience affect during decision-making and how people recruit affect to make choices (Weierich et al., 2010). Future orientation affects an adolescent's definition and exploration of planning for and commitment to goals that guide their developmental course in three domains: (a) higher education; (b) work and career; and (c) marriage and family (Seginer, 2008). Positive beliefs in relation to the future are associated with long term plans for higher education, positive thoughts in relation to work, better social and emotional adjustment at school, and self-perceptions of competency (Catalano et al., 2004). Individuals having extended and long-term future perspectives manifest a stable and healthy model of planning, are able to delay gratification, and are more motivated and committed to pursue their goals, especially in comparison to individuals with short-term future goal perspectives (Bilde, Vansteenkiste, & Lens, 2011; King & Gaerlan, 2014; Lens, 1993). This suggests the potential protective role of positive, long-term future orientations in youth outcomes (McWhirter & McWhirter, 2008). In addition, adolescents will invest in the future to the extent that they perceive reward and return on their investment (Seginer, 2008).

Associations between future expectations and positive outcomes in development have been identified in studies with children. Positive expectations of children in relation to the future were predictors of adjusted emotional regulation and an internal *locus* of control in later years, acting as a protective factor in stressful situations (Wyman et al., 1993). An investigation in Finland evaluated adolescent future perspectives in relation to three basic processes: motivation; planning; and evaluation (Nurmi, 1991). The results showed that the goals and interests of adolescents were affected by their family context, predominantly in activities associated with the end of adolescence and beginning of adulthood, and that worries about the future tended to decrease with age. Another study revealed that highly challenging situations influenced the future orientation of adolescents, and these situations were mediated by hope and moderated by four factors: cultural orientation, developmental stage, interpersonal relations, and intrapersonal characteristics (Seginer, 2008).

When considering the topic of future expectations during the transition to adulthood, the influence of culture, developmental stage, and personality should be taken into account (Seginer, 2008). Asian and Latin American young people differ from European young people with respect to a cultural tradition of family assistance, support, and respect. The former include the family as part of their future perspectives, which does not happen with Europeans. At the same time, life style changes (e.g., the opportunity to attend college) for members of diverse ethnic groups can alter the role of family and its influence in their transition to adulthood (Fuligni, 2007).

Considering the influence of future expectations in the current life of individuals (Catalano et al., 2004; Lens, 1993; Nurmi, 1991; Seginer, 2000, 2008; Wyman et al., 1993; Vansteenkiste et al., 2009), this study selected the Future Expectation Scale for Adolescents (FESA, McWhirter & McWhirter, 2008) to be analyzed in a Brazilian sample. Other measures about future expectation exists, such as the Future Time Perspective (Carstensen, 1996) and the Future Orientation Questionnaire (Seginer, 2000, 2008), but they only see future expectation as a function of anticipated achievements or desired behavior changes. Therefore, the FESA was chosen in the present study, because it adds an orientation of future expectations towards specific domains, namely, "work and education", "children's future", "marriage and family", "health", and "church and community". These specific domains were defined based on the literature in the area of future expectations (McWhirter & McWhirter, 2008).

The FESA was built in the context of a larger study about risk and protective factors among Chilean adolescents. The items originate from diverse sources of information, such as a review of risk and protective factors among Chile and U.S. adolescents; and readings on the Chilean historical, political, and cultural context. Participants in this study were 389 7th- to 12th-grade students in a poor and working-class neighborhood, in

urban central Santiago, Chile (McWhirter & McWhirter, 2008).

The FESA (McWhirter & McWhirter, 2008) items assess the extent to which participants agree with each statement about their future lives. The referential statement 'when I'm an adult...' is followed by future possibilities, such as 'I will achieve the level of education that I desire' and 'I will have a healthy diet'. Answers are based on a 5-point Likert scale, ranging from 'I do not believe this at all' to 'I certainly believe this'.

First, authors examined the FESA through an exploratory factor analysis. Second, they examined its construct validity, by exploring its full-scale and subscale correlations with other theoretically related measures. They found significantly and positively correlation with each of the protective factors included in the analysis (e.g. Hope scale and Children's School-Related Self-Efficacy); and negative correlations with risk factors were small (e.g., Barriers Difficulty, r = -.12; p < .05; McWhirter & Mc-Whirter, 2008).

Based on their initial findings, the original measure was revised, specifically, four items with smaller pattern coefficients were deleted, three items were added, and one item was revised. This resulted in a 24-item measure with possible total scores ranging from 24 to 120. For all subscales, higher scores represent the more positive future expectations associated with the respective domains of work and education, marriage and family, children's future, health, and church and community (McWhirter & McWhirter, 2008). Internal consistency reliabilities for the revised version and subscales are presented in Table 1 (McWhirter & McWhirter, 2009).

Table 1

Subscales Reliability of the FESA Revised Measure in Chilean Adolescent Sample

| Items | Subscale | Alpha (a) | |
|-------------------------|----------------------|-----------|--|
| 1, 6, 7, 12, 13, 17, 22 | Work and Education | .85 | |
| 2, 10, 18 | Children's Future | .69 | |
| 3, 8, 14, 19, 23 | Marriage and Family | .73 | |
| 4, 9, 15, 20, 24 | Church and Community | .73 | |
| 5, 11, 16, 21 | Health | .64 | |

Note. Total scale alpha with an adolescent Chilean sample (α =.88).

Despite the fact that the measure was developed for assessing adolescent future expectations, the FESA addresses life domains also very salient to emerging adults. There is a growing international literature about an extension of the process of transitioning to adulthood observed in a number of industrialized societies (Arnett, 2007; Barry, Nelson, Davarya, & Urry, 2010; Douglass & College, 2007; Facio, Resett, Micocci, & Mistrorigo, 2007; Fuligni, 2007; Galambos & Martínez, 2007; Leonard & Scott-Jones, 2010).

The factors measured by the FESA (Work and Education, Children's Future, Marriage and Family, Church and Community, and Health) are relevant to young people outside of the Chilean context. The factor structure of the measure may vary in different countries as a function of cultural or contextual factors. Understanding such differences is an important first step in using this tool to investigate future expectations in Brazil, and will also serve as a reference to compare the measure's factor structure in different countries. Thus, the present study aimed to analyze the factor structure of the Future Expectation Scale for Adolescents in a Brazilian sample. We expected that the measure may provide important information also about future expectations in young individuals from different countries. The FESA is a new scale and no other studies to date have used the measure. Therefore, the present study is one of the first ones to analyze FESA factorial structure in a sample from another country.

Method

Sample and Procedures

The sample included 547 Southern Brazilians, between 18 and 29 years old (Md = 22 years; IQR¹ = 19-26), 196 (35.8%) males, and 351 (64.2%) females, of low (n = 194, 35.5%) and high (n = 353, 64.5%) socioecomic status (SES). The SES criterion was based on the socioeconomic classification from the Brazilian Association of Institutions of Market Research (Abipeme, 2008). This classification attributes scores for "domestic comfort items" (e.g. washing machine, freezer, and television) and the household's level of education. In the present research, the criterion used to determine the head of household was the parent with the higher level of education. High SES in this study corresponds to scores above 58. The sample of individuals from differing SESs was accessed through different educational institutions: (a) two technology courses (n = 99); (b) three universities (n = 223); (c) two courses focused on preparing students from low SES to the university entrance exam (n = 50); and (d) two schools that work with young individuals and adults with limited or no previous education (e.g., people with writing and reading difficulties and with solving basic math problems; n = 33). There were 142 participants, which accessed the questionnaire exclusively online, and they were not attached to a specific institution. Considering the total sample, 43.1% of participants were working full time (n=236); 9.1% part time (n=50); .4% occasionally (n=4); and 47.3% were not currently working (n=259). Regarding their educational status, 22.5% had less than High school (n=123); 60.5% had High school degree (n=331); 43.1% had College degree (n=236); and 17% had some Graduate school (*n*=93).

¹ Interquartile range

The study questionnaire and instruments were digitalized and applied by two methods: online (i.e., the participant was invited by e-mail to access an external website where the instruments were available) and in-person (i.e., the participant completed the instruments online in a computer lab with one researcher present). The in-person method was used to provide support to participants with limited education who could present difficulties to understand the questionnaire. Research group members were available to answer their doubts during the application. In both methods, the instruments were self-administered. The average time for answering the instrument was one hour.

Translation of the measure took place in several steps. The first step was an independent translation of the English version of the FESA into Portuguese by the first author. The version was reviewed by two bilingual judges, who had no knowledge about the instrument. They compared the version in English to the version translated into Portuguese. Several changes were made based on suggestions by the judges. The revised version in Brazilian Portuguese was then backtranslated into English by a Professor living in U.S. who is fluent in both English and Brazilian Portuguese. Next, the same version was reviewed and backtranslated into English by two bilingual judges, also fluent in both English and Brazilian Portuguese. The backtranslated version was deemed similar to the original.

Ethical Considerations

The research project was approved by the Research Ethics Committee of the Federal University of Rio Grande do Sul (Protocol Number 2011014), institution where the investigation was developed.

Results

Confirmatory Factor Analysis (CFA) was used to evaluate whether the original structure of the FESA's five factors fit to the Brazilian data. To take into account the categorical nature of the scale items, the Weighted Least Square Mean Variance (WLSMV) estimation method was employed in the Mplus software. For fit indices, the Chi-Square (χ^2), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation with 90% Confidence Interval (RMSEA – 90% CI), and Weighted Root Mean Square Residual (WRMR) were calculated. Goodness of fit criterion included a nonsignificant Chi-Square (p > .05), values of the CFI and TLI above .90 or close to .95, values of the RMSEA close to or below .05 (with below .08 an acceptable fit) and values of the WRMR below .60 (Yu, 2002).

The CFA results showed that the original model of the FESA did not fit the Brazilian sample well, χ^2 (242) = 171, p < .001; CFI = .880, TLI = .863, RMSEA = .105 (CI 90%) [.101 - .110], WRMR = 2.10. Thus, an Exploratory Factor Analysis (EFA) was performed with the 24 FESA items. The EFA was conducted using the Principal Axis

Factoring (PAF) extraction method with Oblimin rotation (Costello & Jason, 2005). The adequacy of the sample for this procedure was assessed using the Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity test. Reliability was assessed using Cronbach's alpha index (Cronbach, 1951).

The number of factors extracted was based on the following criteria: (a) instrument theoretical background; (b) Kaiser (1960) criteria (the number of factors extracted is equal to the number of eigenvalues higher than one); (c) Scree plot; and (d) parallel analysis, which compares the eigenvalues found empirically with random eigenvalues (Hayton, Allen, & Scarpello, 2004; Horn, 1965).

Using PAF (Barlett's test of sphericity = 5952,566, df = 276; p < .0001; KMO = .88), six factors were extracted (i.e., eigenvalue > 1). These six factors accounted for 50% of the total variance. Communalities of the 24 items presented a range of .128 (item 9) to .836 (item 20). One of the six factors consisted of only two items (16 and 18), and item 18 cross loaded on two factors. The scree-plot test and the parallel analysis (see Figure 1) suggested a four factor solution as the most representative of the data.

Next we tested a 5 factor solution and compared this with the results of the parallel analysis. A five factor solution is consistent with the original FESA findings, and the 6th factor was not viable. In addition, our review of the parallel analysis results showed that the four factor solution combined Factor three (Marriage and Family) and Factor five (Children's Future). In the Brazilian sample, items about having children that originally loaded on Factor three in the Chilean sample loaded on Factor five, thus, we determined that the most descriptive name for this factor was 'Children and Family'. This left, Factor three was composed of items related to the expectation of having a partner and getting married, but no items focused on having children and building a family. Considering the current diversity of family structures (Borges & Magalhães, 2009; Vieira & Rava, 2010; Zordan, Falcke, & Wagner, 2009), and some couples' option of not having children (Costa, 2007), the five factor structure seems to provide more specific information about respondents, and retains the same number of factors as the original FESA.

Seven items loaded significantly (i.e., factor loadings > .30) on the Factor 1 (Work and education; eigenvalue = 7.35) and accounted for 30% of the variance; five items loaded significantly Factor 2 (Church and community; eigenvalue = 2.95) and accounted for 12% of the variance; four items loaded significantly on the Factor 3 (Marriage; eigenvalue = 1.52) and accounted for 6% of the variance; three items loaded significantly on the Factor 4 (Health; eigenvalue = 1.30) and accounted for 5% of the variance; five items loaded significantly on the Factor 5 (Children and Family; eigenvalue = 1.08) and accounted for 4% of the variance. Considering the parallel analysis suggestion, it is possible that in other samples, a factorial structure of four factors will result; in such case we hypothesize that factors three and five will merge into a single factor.

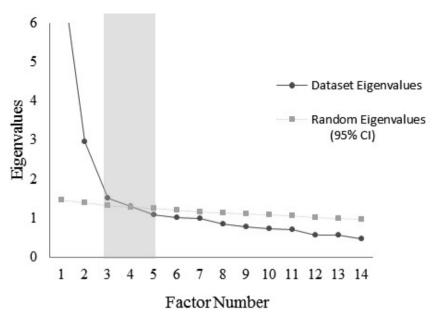


Figure 1. Scree-plot of the empirical eigenvalues and random eigenvalues of the FESA.

In Brazil, the FESA presented a factor structure similar to the original instrument. However, there were some differences in the factors 'Children's Future', 'Marriage & Family', and 'Church and community'. The items 'I will dedicate time to spend with my family' (item 19) and 'My children will live in peace' (item 23), originally in the factor 'Marriage and family', were associated with the factor 'Children's Future'. The factor 'Church and community' also differed in that the items 'I will be a leader in my community' (items 9) and 'I will do volunteer work in my community' (item 15) had factor loadings lower than .30 and were removed from the subscale.

The new structure of FESA in the Brazilian sample presented the following characteristics: 22 items divided into the following subscales (a) Work and Education (items 1, 7, 12, 13, 16, 17, and 22); (b) Children and Family (items 2, 10, 18, 19, and 23); (c) Marriage (items 3, 8, 14); (d) Church (items 4, 20, 24); and (e) Health (5, 11, 16, and 21). The original reliability scale (Cronbach's alpha) was .88. In Brazil, Cronbach's alpha coefficient for the five subscales ranged from .70 to .86. The full-scale Cronbach's alpha reliability was .89 (i.e., 22 items; see Table 2).

Table 2

| | Expl | loratory Fa | ictor Ana | lysis of | the 2 | 24-It | em F | ESA |
|--|------|-------------|-----------|----------|-------|-------|------|-----|
|--|------|-------------|-----------|----------|-------|-------|------|-----|

| Items | original Items | Brazilian Portuguese Items | | Factor loadings | | | | | |
|-------|---|--|------|-----------------|-----|-----|-----|--|--|
| | When I'm an adult | No futuro eu | WE | Ch | Ма | Не | CF | | |
| 6 | I will find a good job | encontrarei um bom trabalho | .75* | .00 | .05 | .08 | .02 | | |
| 13 | I will acquire the things that I want | irei adquirir as coisas que quero | .74* | .10 | .00 | 06 | 06 | | |
| 12 | I will accomplish what I want to do with my life | saberei o que quero fazer com a minha vida | .64* | .07 | 04 | 07 | 04 | | |
| 17 | I will find a job that I enjoy | encontrarei um trabalho de que eu goste | .58* | 06 | .02 | .08 | 11 | | |
| 7 | I will find a steady job | encontrarei um trabalho estável | .54* | .03 | 05 | .11 | .07 | | |
| 22 | I will always have enough resources to eat and to live on | sempre terei recursos suficientes para viver e me alimentar bem | .51* | .01 | .11 | .19 | 19 | | |
| 1 | I will achieve the level of education that I want | alcançarei o nível de educação que eu quero | .50* | 07 | 04 | 02 | .04 | | |
| 4 | I will regularly go to mass or other religious services | irei à missa ou a outros serviços religiosos regularmente | .01 | .94* | 01 | 02 | .10 | | |

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| Items | Original Items When I'm an adult | Brazilian Portuguese Items No futuro eu | Factor loadings | | | | |
|----------------|---|--|-----------------|---------------|---------------|----------------|---------------|
| | | | WE | Ch | Ma | He | CF |
| 20 | I will participate in many church activities | participarei de muitas atividades religiosas | 01 | .94* | .06 | 023 | .03 |
| 24 | I will instill faith in my children or nieces and nephews | cultivarei a fé em meus filhos(as) e/ou sobrinhos(as) | .05 | .61* | 06 | 05 | 12 |
| 15 | I will do volunteer work in my community | realizarei trabalho voluntário na minha cidade | .05 | .25 | 04 | .15 | 10 |
| 9 | I will be a leader in my community | serei um líder na minha comunidade | 05 | .22 | 10 | .13 | 07 |
| 3 | I will get married | me casarei | .06 | 02 | 90* | 03 | .01 |
| 8 | I will get married before I am 25 years old | casarei antes de completar 30 anos | 01 | .01 | 78* | .01 | .03 |
| 14 | My marriage will last forever | meu casamento durará para sempre | .06 | .12 | 52* | .13 | 13 |
| 11 | I will have good health | terei uma boa saúde | .06 | 09 | 05 | .79* | 07 |
| 5 | I will have a healthy diet | terei uma alimentação saudável | .03 | .03 | 02 | .68* | .098 |
| 21 | I will participate in sports or another type of regular exercise | praticarei esportes ou algum tipo de exercício regularmente | .02 | .04 | .02 | .45* | 02 |
| 16 | I will have a long life | terei uma vida longa | .16 | 07 | .02 | .37* | 29 |
| 23 | My children will live in peace | meus filhos(as) terão paz em suas vidas | .11 | .13 | .06 | 02 | 79' |
| 18 | My children will have a long life | meus filhos terão uma vida longa | 01 | 03 | 00 | .12 | 79* |
| 10 | I will have children | terei filhos(as) | 09 | .05 | 35 | 05 | 49* |
| 2 | I will provide a safe place for my children to live | darei a meus filhos um lugar seguro para viver | .20 | .05 | 13 | 08 | 47* |
| 19 | I will dedicate time to spend with my family | dedicarei tempo para minha família | .11 | .06 | 16 | .07 | 38* |
| Factor indexes | | | | | Factor | S | |
| | | WE | Ch | Ma | Не | CF | |
| | Eigenvalues | | 7.35 | 2.95 | 1.52 | 1.30 | 1.08 |
| | Coefficient alphas (a) | | .83 | .86 | .82 | .71 | .83 |
| | Means (SD) | | 4.37 (.52) | 4.07 (.71) | 3.47 (.94) | 2.90 (1.14) | 3.93 (.61) |
| Total | explained variance (%) | | | | 59%ª | | |

Note. WE = Work and Education, Ch = Church, Ma = Marriage, He = Health, CF = Children and family; Extraction method: Principal axis factoring; Rotation method: Oblimin; SD = standard deviation.

^aExplained variance not shown for each factor due to their possible correlation.

*Significant factor loadings (.30 cut-off point).

Discussion

The present study aimed to contribute to research about the power of future expectations in individuals' current lives, by investigating the factor structure of a measure of young people's future expectations in a number of domains. The original measure, the FESA, was developed in Chile and administered to young people in high school. The current study presents data from a sample of 547 young individuals from differing SESs status in Brazil. Results reinforce the importance of considering the influence of contextual specificities in the measures' factorial structure.

The FESA factorial structure in a Brazilian sample was analyzed, and a factor structure with differences and similarities in relation to the original instrument was observed. For instance, minor differences emerged in the Factors Children's Future, Marriage and Family, and Church and Community. Two items about family and children loaded onto the factor Children's Future instead of the factor Marriage and Family. Both factors had stronger internal consistency reliabilities in the Brazilian sample. Specifically, from α =.73 in the Children sample (McWhirter & McWhirter, 2009), the subscale of Children's Future was α =.86 in the Brazilian sample. Similarly, the internal reliability of the Factor Marriage & Family was stronger in the Brazilian sample without these items (α =. 80 vs. .82).

The items 'I will dedicate time to spend with my family' (item 19) and 'My children will live in peace' (item 23) were more strongly associated with the Factor Children's Future, considering that family includes not just the couple, but also other members (e.g., kids). The Factor Marriage and Family referred to 'couple's life'. It was composed of the items 'I will get married' (item 3), 'I will get married before I am 30 years old' (item 8), and 'My marriage will last forever' (item 14). Therefore, the Factor three retained only items related to the expectation of having a partner and getting married, not necessarily those focused on having children and building a family.

Based on these differences, the term 'Family' was added to the Factor Children's Future, which was named 'Children and Family'. The Factor Marriage and Family was re-named 'Marriage'. The difference in these factors may suggest that in this Brazilian sample, marriage is not necessarily associated with having children. People get married for diverse reasons, such as sexual satisfaction, and feelings that they are admired and valued. Couples look for company and security; they avoid loneliness and try to solve previous family problems. Social prestige, material values, legal, and financial aspects are also motivations for marriage. Individuals do not necessarily or invariably get married for the obligation of having children. They look for a relation of affection (Branden, 2000; Carter & McGoldrick, 2001; Costa, 2007).

In addition to this, currently, marriage reflects the extension of adulthood and even of adolescence, and planning children is not the main goal of a marriage. Parenthood became a project possible to happen after years of union. Establishing relations with different partners has become frequent, and marriage became a less critical transition in family cycle than before (Branden, 2000; Carter & Mc-Goldrick, 2001). Thus, differences in the factor structure may be due to differences in the role of marriage between Brazil and Chile. It is also possible that the difference in the age of the samples contributed to the difference in the factor structure. It may be that for adolescents in high school, marriage and having children are viewed as more similar life roles, while for emerging adults who may be closer to making marriage decisions, having children is more clearly a distinct role.

The Factor 'Church and community' also presented a new structure. The items 'I will be a leader in my community' (items 9) and 'I will do volunteer work in my community' (item 15) presented factor loadings lower than .30 and were removed from the subscale. This new structure of the instrument may be related to the plural meanings of the term 'Community' (Schmidt, 2010; Silva & Simon, 2005). In Brazil, the conception of community is frequently associated with poorer environments. Intervention placed in low SES contexts use the term 'community' to name these fragile environments (Elvas & Moniz, 2010). Poorer settings lack of governmental investment and members of the neighborhood needs to find different strategies to deal with their difficulties, in a communitarian direction (Schmidt, 2010). The context of insecurity faced by these families leads them to find strategies to support each other, count on their broad family and neighbors as reference, and build a solidarity network (Bem & Wagner, 2006; Llanos, Orozco, & Garcia, 1999). Considering the sample was composed of LSES and HSES participants, it might be the case these two items did not correspond to all participants' reality.

The items related to religiosity, namely 'I will regularly go to mass or other religious services' (item 4), 'I will participate in many church activities' (item 20), and 'I will instill faith in my children or nieces and nephews' (item 24) were maintained in the Factor 'Church and Community'. It is probably related to the fact that Brazil is a predominantly Catholic country (Cerqueira-Santos & Koller, 2009) and religiosity is present in low and high SES contexts, constituting part of people's activities.

Continued research on the utility of the FESA is warranted. Future research recommendations include investigating the properties of the FESA with Brazilian adolescents. The FESA may be useful in research with young adults in Brazil on how their future expectations influence important behaviors such as decisions about postsecondary schooling or training, civic engagement, timing of marriage or committed partnerships and childbearing, and health behaviors. Such research might be carried out from the framework of Future Time Perspective Theory (Lens, 1993; Nuttin, 1983; Schmitt, 2010).

Conclusion

This study analyzed the factor structure of FESA in the Brazilian context and aimed to provide a research tool for subsequent studies about the influence of young individuals' future expectations in their current life. Young individuals' future prospects are significant because they are related to long term plans about the future including (e.g. higher education and self-perception of competence).

The investigation is an important contribution for studies about the influence of future perspectives in young individuals' present-day. The psychometric analysis of FESA properties in the Brazilian context may contribute to the improvement of the original measure and for future comparisons of the instrument's factorial properties in different contexts. Coming studies may consider including other regions of Brazil in order to examine the inventory factorial structure within the country. Future investigations may also compare the mean score of FESA's dimensions among different groups of comparisons (sex, SES, age etc.).

References

- Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, 1(2), 68-73.
- Barry, C. M., Nelson, L., Davarya, S., & Urry, S. (2010). Religiosity and spirituality during the transition to adulthood. *International Journal of Behavioral Development*, 34, 311-324. doi:10.1177/0165025409350964
- Bem, L. A., & Wagner, A. (2006). Reflexões sobre a construção da parentalidade e o uso de estratégias educativas em famílias de baixo nível socioeconômico [Reflexions on parenthood and educative strategies in families with low socioeconomic status]. *Psicologia em Estudo*, 11(1), 63-71. Retrieved from http://www.scielo.br/pdf/pe/v11n1/v11n1a08.pdf
- Bilde, J., Vansteenkiste, M., & Lens, W. (2011). Understanding the association between future time perspective and selfregulated learning through the lens of self-determination theory. *Learning and Instruction*, 21, 332-344. doi:10.1016/j. learninstruc.2010.03.002
- Borges, C. C., & Magalhães, A. S. (2009). Transição para a vida adulta: Autonomia e dependência na família [Transition to the adult life: Autonomy and dependence]. *Psico*, 40(1), 42-49. Retrieved from http://revistaseletronicas.pucrs.br/ojs/index. php/revistapsico/article/viewFile/3993/4140
- Branden, N. (2000). La psicologia del amor romántico [The romantic love psychology]. Barcelona, España: Paidós.
- Brazilian Association of Institutions of Market Research. (2008). *Critério de classificação socioeconômico do Brasil (CCSEB)*. São Paulo, SP: Associação Brasileira de Anunciantes.
- Carstensen, L. L. (1996). Future Time Perspective Scale. Stanford, CA: Stanford University.
- Carter, B., & McGoldrick, M. (2001). As mudanças no ciclo de vida familiar: Uma estrutura para a terapia familiar [The changing family life cycle]. Porto Alegre, RS: Artmed.
- Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *The Annals of the American Academy of Political and Social Science*, 591, 98-124.

- Cerqueira-Santos, E., & Koller, S. H. (2009). A dimensão social psicossocial da religiosidade entre jovens brasileiros [Psychosocial dimension of religiosity among Brazilian youth]. In M. C. Lobório & S. H. Koller (Eds.), Adolescência e juventude: Risco e proteção na realidade brasileira (pp. 133-154). São Paulo, SP: Casa do Psicólogo.
- Costa, G. (2007). O amor e seus labirintos [Love and its labyrinths]. Porto Alegre, RS: Artmed.
- Costello, A. B., & Jason, W. O. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Pratical Assessment, Research and Evaluation*, 10(1/9).
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334. doi:10.1007/ bf02310555
- Deci, E., & Ryan, R. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268. doi:10.1207/ S15327965PLI1104 01
- Douglass, C. B., & College, M. B. (2007). From duty to desire: Emerging adulthood in Europe and its consequences. *Child Development Perspectives*, 1, 101-108. doi:10.1111/j.1750-8606.2007.00023.x
- Elvas, S., & Moniz, M. J. V. (2010). Sentimento de comunidade, qualidade e satisfação de vida [Community feeling, quality of life and life satisfaction]. *Análise Psicológica*, 3(28), 451-464. Retrieved from http://www.scielo.oces.mctes.pt/pdf/aps/ v28n3/v28n3a06.pdf
- Facio, A., Resett, S., Micocci, F., & Mistrorigo, C. (2007). Emerging adulthood in Argentina: An age of diversity and possibilities. *Child Development Perspectives*, 1, 115-118. doi:10.1111/j.1750-8606.2007.00025.x
- Fuligni, A. J. (2007). Family obligation, college enrollment, and emerging adulthood in Asian and Latin American families. *Child Development Perspectives*, 1, 96-100. doi:10.1111/ j.1750-8606.2007.00022.x
- Galambos, N. L., & Martínez, M. L. (2007). Poised for emerging adulthood in Latin America: A pleasure for the privileged. *Child Development Perspectives*, 1, 119-114. doi:10.1111/ j.1750-8606.2007.00024.x
- Guimarães, S. E. R., & Boruchovitch, E. (2004). O estilo motivacional do professor e a motivação intrínseca dos estudantes: Uma perspectiva da Teoria da Autodeterminação [Teacher's motivational style and students' intrinsic motivation: The selfdetermination perspective]. *Psicologia: Reflexão e Crítica*, 17, 143-150. doi:10.1590/S0102-79722004000200002
- Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods*, 7, 191-207. doi:10.1177/1094428104263675
- Horn, J. L. (1965). A rationale and test for estimating the number of factors in factor analysis. *Psychometrika*, 30, 179-185. doi:10.1007/BF02289447
- Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, 20, 141-151. doi:10.1177/001316446002000116
- Kernerman, L. (2007). Password: K dictionaries, English dictionary for speakers of Portuguese. São Paulo, SP: Martins Fontes.
- King, R. B., & Gaerlan, M. J. M. (2014). How you perceive time matters for how you feel in school: Investigating the link between time perspectives and academic emotions. *Current Psychology*, 33(3), 282-300. doi:10.1007/s12144-014-9213-x

- Lens, W. (1993). La signification motivationnelle de la perspective future. *Revue Québécoise de Psychologie*, 14(1), 69-83.
- Leonard, K. C., & Scott-Jones, D. A. (2010). Belief-behavior gap? Exploring religiosity and sexual activity among high school seniors. *Journal of Adolescent Research*, 25, 578-600. doi:10.1177/0743558409357732
- Llanos, R. A., Orozco, C. M., & Garcia, O. S. (1999). Relationship between the social networks and the family dynamics of low-income working women. *Journal of Community Psychology*, 27, 243-255. doi:10.1002/(SICI)1520-6629(199905)27:3<243::AID-JCOP1>3.0.CO;2-A
- McWhirter, E. H., & McWhirter, B. T. (2008). Adolescent future expectations of work, education, family, and community: Development of a new measure. *Youth & Society*, 40, 182-202. doi:10.1177/0044118X0831425
- McWhirter, E. H., & McWhirter, B. T. (2009). Subscale Reliability of the FESA Revised measure in Chilean adolescent sample. Unpublished manuscript.
- Nowak, K., Milfont, T. L., & Van Deer Meer, E. (2013). Future versus present: Time perspective and pupillary response in a relatedness judgment task investigating temporal event knowledge. *International Journal of Psychophysiology*, 87, 173-182. doi:10.1016/j.jjpsycho.2012.12.006
- Nurmi, J. E. (1991). How do adolescents see their future? A review of the development of future orientation and planning. *Developmental Review*, 11, 1-59. doi:10.1016/0273-2297(91)90002-6
- Nuttin, J. (1983). *Teoria da motivação humana* [Theory of human motivation]. São Paulo, SP: Loyola.
- Ramos, D. O., Seidl-de-Moura, M. L., & Pessôa, L. F. (2013). Jovens e metas para o futuro: Uma revisão crítica da literatura. *Estudos de Psicologia* (Natal), 18, 467-475. doi:10.1590/ S1413-294X2013000300007
- Schmidt, J. P. (2010). O comunitário em tempos de público não estatal [The communitarian in times of the not stateowned public institution]. *Avaliação* (Campinas), *15*, 9-39. doi:10.1590/S1414-40772010000100002
- Schmitt, R. (2010). Teoria da perspectiva de tempo futuro: Aplicações preliminares e reflexões voltadas à pesquisa no ensino superior. *Revista Educação por Escrito*, 1(1), 5-16. Retrieved from http://revistaseletronicas.pucrs.br/ojs/index. php/porescrito/article/view/7351/5376
- Seginer, R. (2000). Defensive pessimism and optimism correlates of adolescent future orientation: A domain-specific analysis. *Journal of Adolescent Research*, 15, 307-326. doi:10.1177/0743558400153001
- Seginer, R. (2008). Future orientation in times of threat and challenge: How resilient adolescents construct their future. *International Journal of Behavioral Medicine*, 32, 272-282. doi:10.1177/0165025408090970
- Silva, R. C., & Simon, C. P. (2005). Sobre a diversidade de sentidos de comunidade [About the diversity of community meanings]. *Psico*, 36(1), 39-46. Retrieved from http://revistaseletronicas.pucrs.br/ojs/index.php/revistapsico/article/ viewFile/1373/1073
- Vansteenkiste, M., Soenens, B., Verstuyf, J., & Lens, W. (2009). What is the usefulness of your schoolwork? The differential effects of intrinsic and extrinsic goal framing on optimal learning. *Theory and Research in Education*, 7, 155-164. doi:10.1177/1477878509104320
- Vickery, T. J., & Jiang, Y. V. (2009). Inferior parietal lobule supports decision making under uncertainty in humans. *Cerebral Cortex, 19*, 916-925. doi:10.1093/cercor/bhn140

- Vieira, S., & Rava, A. C. (2010). Ninho cheio: Uma nova etapa do ciclo vital familiar? [The full nest: a new stage of the family life cycle?]. *Barbarói*, 33, 118-134. Retrieved from http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S0104-65782010000200008&lng=pt&nrm=iso
- Weierich, M. R., Kensinger, E. A., Munnell, A. H., Sass, S. A., Dickerson, B. C., Wright, C. I., & Barrett, L. F. (2010). Older and wiser? An affective science perspective on age-related challenges in financial decision making. SCAN, 6, 195-206. doi:10.1093/scan/nsq056
- Wyman, P., Cowen, E., Work, W., & Kerley, J. (1993). The role of children's future expectations in self-system functioning and adjustment to life stress: A prospective study of urban at-risk children. *Developmental Psychology*, 5, 649-661. doi:10.1017/S0954579400006210
- Yu, C. Y. (2002). Evaluating cutoff criteria of model fit indices for latent variable models with binary and continuous outcomes. Los Angeles, CA: University of California.
- Zordan, E. P., Falcke, D., & Wagner, A. (2009). Casar ou não casar? Motivos e expectativas com relação ao casamento [To marry or not to marry? Motives and expectations in relation to marriage]. *Psicologia em Revista*, 15, 56-76. doi:10.5752/ P.1678-9563.2009V15N2P56

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