RUNINGHEAD: SELF-REPRESENTATION QUESTIONNAIRE

Self-representation questionnaire for youths in residential care.

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Introduction

The reflective capacity (i.e. knowing of ourselves) has raised interest and discussion in the fields of philosophy, sociology and psychology. Over the past three decades, the theoretical and methodological advances in these fields have contributed to the recognition that the knowledge that individuals construct about themselves (i.e. the self-concept) has important functions in terms of information processing, construction of meaning, and emotional and behavioral self-regulation (Baumeister, 1998; Brandstädter & Greve, 1994; Harter, 2003; Higgins, 1996; Jacobs, Bleeker, & Constantino, 2003; Leary & Tangney, 2003; Markus & Herzog, 1991; Markus & Wurf, 1987). Notwithstanding the advances in adolescent's self-concept and self-esteem research in the last decades, there is still a dearth of research of adolescents' self-representations with measures focused on traits/attributes, and its analysis with specific groups, such as adolescents in residential care. Given the lack of research and of previously validated self-representation measures for adolescents and young adults in residential care, the main aim of this study is to develop and validate a self-representation questionnaire for youth (i.e. adolescence and early adulthood) in the context of residential care.

Self-representation theoretical framework

The self-concept can be defined as the conception and evaluation of the self, including values, abilities, goals and personal worth (Corsini, 1999). The self-concept includes affective, cognitive and behavioral components and is composed of conscious and unconscious representations that became more integrated and organized in supraordinate self-representations throughout life (Horowitz, 2000). It also includes many types of information (e.g., body image, values, roles), and a variety of desired, ideal, realistic, past, present and future self-conceptualizations (Horowitz, 2000). According to Byrne (1996), self-esteem is limited to an affective/evaluative component of the broader self-concept. On the other hand, self-representation refers to a cognitive component of the broader self-concept. These theoretical differences are reflected in the definition and operationalization of the constructs. Thus the

cognitive dimension of the self, i.e. the self-representation, should be defined as a set of images, representations, sketches, or prototypes that the individual has about himself/herself, stored in memory as a knowledge structure or mental representation (Carver & Scheier, 1985; Markus & Wurf, 1987). In this study, we have adopted Markus' self conceptual framework (1977). According to Markus (1977), the efforts to organize and explain one's own behavior result in the formation of cognitive structures about the self, i.e. self-schemata – that are “cognitive generalizations about the self, derived from past experience, that organize and guide the processing of the self-related information contained in an individual's social experience” (Markus, 1977, p.1).

The construction of self-representation is particularly relevant during adolescence as this is a stage of identity construction and self-concept exploration (Erikson, 1968; Steinberg & Morris, 2001), where significant changes occur in content and structure of self-representation (e.g., Damon & Hart, 1988; Harter, 1990; Montemayor & Eisen, 1977). Indeed, adolescents' acquisition of cognitive skills allows a reorganization of self-representation and greater abstraction and diversification in the way they think about themselves (Damon & Hart, 1982; Fischer, 1980; Inhelder & Piaget, 1958). There are also social changes in the contexts where adolescents participate, with a diversification of social roles and relationships, growing autonomy from families or educators and growing importance of the relationship with peers. As a result, adolescents have to deal with different expectations and pressures in the socialization process (Harter, 1999, 2003; Harter & Monsour, 1992). The cognitive, social, physical and emotional changes that occur during adolescence contribute to the construction and development of self-representation. There are however differences within this phase (e.g., age and gender differences).

According to Rosenberg (1986) the way adolescents think about themselves becomes increasingly multidimensional and differentiated (rather than a global construct). While younger adolescents describe themselves in terms of relationships and social networks, older adolescents tend to give self-descriptions that suggest that the self remains relatively differentiated from primary social

groups (e.g., parents, siblings, family; Labouvie-Vief, Chiodo, Goguen, Diehl, & Orwoll, 1995).

Moreover, research points to the emergence of more abstract definitions during adolescence. Indeed, during this phase, individuals give more emphasis to the interior psychological world and greater focus to psychological attributes, interpersonal characteristics and emotions (Petersen & Leffert, 1997) as well as integrate in their self-descriptions contradictory traits and negative information (Santrock, 1998).

Gender differences appear in specific dimensions of self-representation, which may be related to the gender socialization processes and social pressures. For example, some studies suggest that girls and women have worse physical self-concepts than boys and men (e.g., Allgood-Merten, Lewinsohn, & Hops, 1990; Wood, Becker, & Thompson, 1996) but have better self-representations regarding intimate relationships (e.g., Harter, 1988; Marsh, 1989). In addition, there are studies showing that girls have better self-representations in behavior dimensions (e.g., Harter, 1999; Peixoto & Mata, 1993), and others showing that boys tend to have slightly higher global self-concept scores than girls (e.g., Bolognini, Plancherel, Bettschart, & Halfon, 1996).

Self-representation of youth in residential care

The study of adolescents' self-representations with measures focused on traits, and its analysis in specific groups of youth, such as youth in residential care, is still unexplored. The study of self-representation with this specific group is highly important, considering that self-representation is a cognitive generalization about the self derived from individual and social experience (Markus, 1977). Indeed, social interactions are suggested to be key to self-concept development (Cooley, 1902; Mead, 1934), since it is in the context of past and current interactions with significant specific others (Cooley, 1902) and with others in general (i.e., the "generalized other"; Mead, 1934) that individuals build and transform their representations. For adolescents in residential care, the development of a negative self-representation may be the consequence of their previous negative experiences (Cook et al., 2005; Knoverek, Briggs, Underwood, & Hartman, 2013; Spinazzola et al., 2005; van der Kolk,

Roth, Pelcovitz, Sunday, & Spinazzola, 2005). Besides pre-care, some during care variables may have impact on self-representation development. For example, some studies indicate that the length of placement, the placement stability, the opportunities provided regarding education and social engagement, and the relationships with caregivers have impact on youth outcomes (e.g., Barbell & Freundlich, 2001; Del Valle, Bravo, Alvarez, & Fernanz, 2008; Jim Casey Youth Opportunities Initiative, 2011; Newton, Litrownik, & Landsverk, 2000).

In addition, the negative social images about youth in residential care (Calheiros, Garrido, Lopes, & Patrício, 2015;¹) may also have a negative impact on their self-representation. Some studies indicate that institutionalized youth have low self-respect indexes (Dévai, 1989) and less self-acceptance than non-institutionalized youth (Cashen, Lewis, & Lemmon, 1979). We found few studies comparing the self-concept of youth in care with the self-concept of youngsters out-of-care. Nevertheless, studies indicate that youth in care have a worse self-concept, especially on intellectual, academic and behavior dimensions, than youth in general (Magalhães & Lopes, 2011). Others indicate that children and youth in residential care exhibit self-perception, self-esteem and life satisfaction levels that are lower than those in adoptive families and those who have grown up with their biological families in socially unprivileged communities (Sánchez-Sandoval, 2015). Some researchers suggest that this population has more difficulty in establishing a positive self-concept and may adopt a negative self-identity as a result of the stigmatization of being a child in care (Kools, 1997). For example, according to Yancey (1992) the social maladaptation of out of home adolescents, especially group home residents, may reflect identity disturbances created by the negative images perpetuated by the dominant society and unfiltered by optimal parental socialization. The few studies with youth under child protection services focus mainly on foster care (e.g. Mosek & Adler, 2001) or on specific dimensions of self such as self-compassion (Tanaka, Wekerle, Schmuck, Paglia-Boak, & MAP

¹ Garrido, M. V., Patrício, J. N., Calheiros, M. M., & Lopes, D. (Unpublished results). Comparing the social images of youth in and out of residential care. Submitted manuscript.

Research Team, 2011) and self-criticism (Roitman & Gilboa-Schechtman, 2014), and not on the multidimensional self-representation of youth in residential care.

Although not focused on youth in residential care, some studies indicate that youth with higher levels of self-esteem have lower levels of psychological distress (Dang, 2014), and that self-concept is directly and negatively related to adolescent reports of internalizing and externalizing problems (Hsieh & Stright, 2012; Schwartz et al. 2006). Self-representation can function as a protective factor leading to better health and social behavior, acting as a buffer against the impact of negative influences (Mann, Hosman, Schaalma, & Vries, 2004). Therefore, it may act as a determinant for the mental health of children and youth in residential care who are considered one of the most severely troubled and disturbed groups compared to the general youth population (Iwaniec, 2006). There is growing evidence that self-concept related deficits represent an important set of determinant variables that both explains and predicts behavior (Lee & Stone, 2012; Marsh & O'Mara 2008). Self-concept variables are robustly associated with internalizing (McGrath & Repetti, 2002; Trzesniewski et al. 2006; Ybrandt, 2008) and externalizing symptoms (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Marsh, Parada, Yeung, & Healey, 2001; Vermeiren, 2003).

Self-representation measurement

According to Keith and Bracken (1996) the most frequently used techniques for self-concept assessment includes questionnaires, such as Tennessee self-concept scale (Roid & Fitts, 1988), Self-perception profile for children and for adolescents (Harter, 1985, 1988), Self-description questionnaire I and II (Marsh, 1988, 1990), and Multidimensional self-concept scale (Bracken, 1992) among others. Most of this research has focused on adolescents' perception of competence in different domains and self-esteem (e.g., Baumeister, 1995; Bong & Skaalvik, 2003; Harter, 2003; Skaalvik & Bong, 2003; Wilgenbusch & Merrell, 1999). In the field of social cognition, a set of new measures has been developed to evaluate self-representation and the processes associated with it, such as reaction times, priming procedures, recognition and recall measures (Swann & Bosson, 2010). One of the most used

methods in the evaluation of self-representation consists of a list of adjectives with a rating of importance, valence and of how much a certain attribute is feared, expected, or desired, among others (Kihlstrom & Klein, 1994). However, theory and research examining self-representation has mainly been developed with adults. Hence there is a dearth of research and measures on adolescents' self-representation, and there are no instruments to assess self-representation for adolescents in residential care. An instrument developed specifically for the youth in care would represent an important addition to this field. The use of instruments with youth in residential care that do not take into consideration appropriate adolescent development and the context of foster care, may not reflect their experience. Therefore, having a measure of self-representation matched to these young people's experiences has the potential to improve the literature about youth in residential care; for example, with studies focused on the relation between the self-representation and the youth's resiliency, overall well-being, and trajectories of risk and protective factors as youth transition out of care. A measure developed for these youth should include attributes similar to those used with youth not in care but also attributes covering the social images of youth in care, in order to analyze the internalization of these images on youth's self-representation.

In sum, given the lack of research and of previously validated self-representation measures for youth in residential care, the main aim of this study is to develop and validate a self-representation questionnaire for youth in residential care (SRQYRC).

Method

Participants

The sample was composed of 848 youth (i.e., adolescents and young adults) (44.5% females) from 71 residential care institutions, with ages between 11.90 and 25.36 years old ($M = 16.21$, $SD = 2.21$). The majority of participants were Portuguese (85.73%), were placed in a care institution for 0.01 to 20.84 years ($M = 3.70$, $SD = 3.67$) and 37.1% had previous out of home placements. For the

youth with previous placements the total length of time in care ranged between 0.19 to 19.65 years ($M = 7.51$, $SD = 4.30$). The residential care institutions hosted between 3 and 53 youth ($M = 24.30$, $SD = 12.80$) and had between 0 to 4 social care professionals (e.g., social workers, psychologists) ($M = 2.40$, $SD = 0.95$) and between 0 and 15 caregivers ($M = 7.74$, $SD = 3.52$). The mean ratio was of 4.63 youth per caregiver ($SD = 8.03$, $Min = 1$, $Max = 41$).

Instruments

Self-representation. To measure youth's self-representation we used the self-representation questionnaire for youth in residential care (SRQYRC) developed in this study. The questionnaire includes a set of 37 attributes (e.g., Friend, Clean, Nice, Helpful, Funny, Affectionate, Fighter, Protected, Responsible) and the youth were asked to rate each attribute on a 5-point Likert-scale, indicating how self-descriptive each attribute was (1= I am definitely not like that; 5= I am totally like that).

Internalizing and externalizing problems. The youth's caregivers completed the Child Behavior Checklist (CBCL Portuguese version, Achenbach et al., 2014) to measure the youth's mental health, in terms of internalizing and externalizing problems. The 118 items of this measure were used; the items are rated as Not True (0), Somewhat or Sometimes True (1), or Very True or Often True (2), and are organized in 9 scales (Anxious/depressed, Withdrawn/depressed, Somatic complaints, Rule-breaking behavior, Aggressive behavior, Social problems, Thought problems, Attention problems, Other problems) and 3 global scores (Internalizing, Externalizing, Total). This measure has adequate psychometric properties, namely adequate reliability and good model fit indexes ($RMSEA = .020$, $CFI = .919$, $TLI = .917$) (Achenbach, 1991; Achenbach & Rescorla, 2001; Achenbach et al., 2014).

Procedures

Questionnaire Development Overview. The instrument developed was based on attributes as our focus was on the cognitive component of self-concept and on self-representation. The adjective

checklist is a frequently used technique dating from the 50s that requires the respondent to indicate to what extent adjectives are self-describing. Some authors considered this type of measure insufficiently reliable or valid (Wylie, 1974), since the researcher may fail to identify the specific adjectives included on their research protocol. Therefore, in order to identify an adequate list of attributes, we adopted two criteria: 1) attributes frequently used by others to describe youth in care, and 2) attributes used by the youth to describe themselves.

The questionnaire developed to measure youth self-representation included a set of 37 attributes: 23 attributes were retrieved from an instrument used to evaluate the social image of youth in care (Social Images Evaluation Questionnaire of youth in residential care²) and 14 attributes were retrieved from an instrument used to evaluate the youth self-representation (Self-Representation Scale for Adolescents, Martins, 2012; ³). The Social Images Evaluation Questionnaire of youth in residential care was developed using an open-ended questionnaire analysis (to identify the attributes that people use to describe the youth in care), and is organized in three social image dimensions - Self-competent, Happy and Nurtured, and Sad and Troublemaker. The Self-Representation Scale for Adolescents was developed using two distinct procedures toward the selection of a list of attributes: word frequency in school books (selection of attributes more often mentioned) and an open-ended questionnaire analysis (to identify the attributes used in the self-descriptions of adolescents). This last scale is organized in six self-representation dimensions - Instrumental, Social, Intelligence, Emotional, Physical Appearance, and Opposition. In both scales, after the identification of the most frequent attributes, attributes' valence, scale structure, and other psychometric properties (distribution analysis, reliability

² Lopes, D., Calheiros, M. M., Garrido, M. V., & Patrício, J. N. (Unpublished results). Development and validation of a social images evaluation questionnaire of youth in residential care. Submitted manuscript.

³ Silva, C. S., Martins, A. C., & Calheiros, M. M. (Unpublished results). Development and psychometric properties of the Self-representation Questionnaire for Adolescents (SRQA). Submitted manuscript.

and construct validity) were analyzed. After the selection of attributes from these two scales a new scale was developed and applied to youth in residential care.

Recruitment and data collection procedures. All the residential care units (381) registered in an online social services' database were invited to participate in this study. Out of the 151 residential care units (39.9%) that replied, 93 (61%) accepted to participate in the project and 59 (39%) declined (38 justified that they did not have young people with 12 or more years; 17 justified that they were overloaded with work and had no time to participate; 1 was closed; and 3 gave no reason for declining). From the 93 institutions that accepted to participate in this study 4 quit due to the amount of data that was necessary to collect, one was excluded because it did not have a professional team as legally required, and 17 institutions were not available to conduct the study during the project data collection term. Thus, a set of 71 long (for placements longer than 6 month) and temporary (for placements shorter than six month) term standard residential care units were included in the study. Young people 12 years old and over from these institutions were included in the study, with exception of young people with major cognitive difficulties (information given by the residential unit director) or those who declined to participate in the study. Overall, youth participation ranged from 13.33% to 100% ($M = 64.09$, $SD = 21.82$) across institutions. Data collection with young people was conducted in groups of 3 to 20 participants (mean of 10 youth by group and a ratio of at least 1 researcher for 10 youth at all times). The instructions and objectives were explained in the beginning, and the researcher was always present to answer any questions and help the youth when necessary. The youth caregivers (educators) who spent the most amount of time with each youth filled the CBCL. In the cases where there was more than one caregiver spending the same amount of time with a young person, a caregiver was randomly selected. Finally, the case managers filled a form to collect young people's additional demographic information (e.g., sex, age, length of placement, prior placements). The youth, caregivers and case managers were given information regarding the aims of the research, anonymity

and confidentiality of the data and signed an informed consent prior to their participation. This project was approved by the Ethics Commission of Lisbon University Institute (ISCTE-IUL).

Data analyses procedures. We used SPSS (Version 20) and Mplus (Version 7) to analyze the data. First, we did a descriptive analysis of the SRQYRC questionnaire items. Next, to test the construct validity, we examined the factor structure of the questionnaire with an exploratory and a confirmatory factor analysis. This analysis was made randomly dividing the sample into two subsamples using the SPSS command that randomly selects approximately 50% sample of cases. Then, we used part of the sample ($n = 431$) in an exploratory factor analysis (with a principal components extraction method and Varimax rotation), and the other part ($n = 417$) in a confirmatory factor analysis. Next, we used Cronbach's alpha, the item-total correlation, and the inter-item covariance to measure the internal consistency of the scale. We also tested the relationship between self-representation subscales using the Pearson correlation coefficient; and analyzed the correlation of self-representation with CBCL dimensions. Finally, we used T-tests and multiple linear regression analyses to analyze potential gender, age, number of previous placements and length of placement differences on self-representation.

Results

Item Descriptive Analysis

All items demonstrated adequate variability (see Table 1), with values ranging from 1 to 5 and standard deviations near 1 point. The skewness and kurtosis values are not far from normal distribution. Values less than 2 for univariate skewness and 7 for univariate kurtosis were used as criteria for evaluating univariate normality (Curran, West, & Finch, 1996).

- Insert Table 1 –

During the data collection there were some items that elicited questions about their meaning (i.e. the items in which young people had more questions) such as neglected, traumatized, helpful, misfit, competent, low self-esteem, committed and unmotivated. These items were among the ones

with more missing/error responses (Table 1). The items clever, responsible, beautiful, abandoned, loved, ugly, cherished and angry were also among the items with more missing/error responses. This may indicate that these items were not so clear to youth, or were subject to more biased responses, or more difficult to evaluate.

Test dimensionality

The subsample used for the Exploratory Factor Analysis is composed of 431 youth (42.2% females), from 68 residential care institutions and ages between 11.92 and 23.01 years old ($M = 16.21$, $SD = 2.24$). An exploratory factor analysis, with a principal components extraction method and Varimax rotation, suggested a multidimensional test, with an eight-factor solution that accounted for 59.91% of total variance ($KMO = .872$; Bartlett's Test of Sphericity = 5190.76, $p < .001$). The items with loadings lower than .400 and contributing to more than one factor with a difference lower than .150 between the respective loadings were excluded from the analysis. After the elimination of 6 items through this process a final solution with 8 factors accounting for 62.69% of total variance ($KMO = .853$; Bartlett's Test of Sphericity = 4150.49, $p < .001$) was obtained (Table 2).

- Insert Table 2 -

As shown in Table 2, considering the type of attributes that determine each factor, we decided to name the factors as: Social, Behavioral, Competence, Emotional, Relational, Instrumental, Misfit and Physical appearance. Cronbach's alpha indicated good internal consistency for all factors, except for Instrumental and Misfit. The items ugly and messy were reversed for the subsequent analysis.

Confirmatory factor analysis

The subsample used for the confirmatory factor analysis (CFA) was composed of 417 youth (46.8% females), from 70 residential care institutions, with ages between 11.90 and 25.36 years old ($M = 16.21$, $SD = 2.19$). In the CFA, we tested the model obtained in the exploratory factor analysis. The indices and respective cut-off values used to evaluate the model fit were the following: Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) between .80 and .90 acceptable, between

.90 and .95 good and above .95 very good; Root Mean Squared Error of Approximation (RMSEA) between .05 and .10 good and below .05 very good; chi-square fit index divided by degrees of freedom (χ^2/df) between 2 and 5 acceptable, between 1 and 2 good, and approximately 1 very good; and finally we used Akaike's Information Criterion (AIC) and Bayesian Information Criterion (BIC) as a comparative measure of fit, where lower values indicate a better fit and so the model with the lowest AIC and BIC is the best fitting model (Hu & Bentler, 1999; Marôco, 2010; Schermelleh-Engel, Moosbrugger, & Müller, 2003).

The first model (Model A) displayed unsatisfactory fit index values. Therefore, we excluded from the model the dimensions that had more problems (poor alphas, poor variance estimates and poor standardized regression weights estimates, and items that were correlated with other dimensions in the model), namely Instrumental and Physical appearance. We also deleted item 27 (affectionate) that was highly correlated with other dimension in the model. The second model (Model B) displayed acceptable, but not good fit index values. Therefore, considering modification indices above .20, two items were deleted because they were highly correlated with other dimensions or with errors of other dimension (clever, low self-esteem), three pairs of errors in the same dimensions were correlated, and the dimensions with positive correlations kept correlated between them and were uncorrelated with the dimensions to which they had negative relations (Model C). The third model (Model C) achieved a good fit. Finally, we tested two second order models, one with one second order factor (Model D) and other with two second order factors (Model E). As can be seen in Table 3, the best model fit was obtained with the two second order factors (Model E), one containing the Social, Competence and Relational dimensions (Global positive representation factor) and other containing the Behavioral, Emotional and Misfit dimensions (Global negative representation factor).

- Insert Table 3 -

Therefore, the final model is composed of 23 items, organized in six dimensions and two second order factors (Table 4). The dimensions Social, Competence and Relational are composed of

positive attributes, while the dimensions Behavioral, Emotional and Misfit are composed of negative attributes. All the dimensions and second order factors varied between 1 and 5, as such, the youth with higher values on the Social, Competence and Relational dimensions (i.e. that describe themselves as more funny, nice, helpful and friend, as more competent, intelligent, committed and hard-working, and as more loved, cherished and protected) and with lower values on the Behavioral, Emotional and Misfit dimensions (i.e. that describe themselves as more problematic, conflicting, aggressive, misbehaved, recalcitrant and stubborn, as more depressed, lonely, sad and traumatized, and as more misfit and neglected) have better self-representations than the youth with lower values on the Social, Competence and Relational dimensions and with higher values on the Behavioral, Emotional and Misfit dimensions.

- Insert Table 4 -

Comparing these dimensions with the dimensions of the measures from which the items were selected (Social Images Evaluation Questionnaire of youth in residential care: self-competent, happy and nurtured, and sad and troublemaker; Self-Representation Scale for Adolescents: instrumental, social, intelligence, emotional, physical appearance, and opposition), we can see that the Instrumental and Physical appearance dimensions were excluded after the confirmatory factor analysis due to variance problems. The other dimensions remained represented but with a specific organization, i.e., the Self-competent and Intelligence dimensions were merged in the Competence dimension; the Sad and Troublemaker, the Emotional, and the Opposition dimensions were organized into the Behavioral, Misfit and Emotional dimensions; the Happy and Nurtured and the Social dimensions were organized into the Social and Relational dimensions.

Internal Consistency Reliability

Regarding the scales' internal consistency, the Cronbach's alphas shows that all dimensions have an adequate internal consistency, except the Misfit dimension (Social $\alpha = .813$, Competence $\alpha = .748$, Relational $\alpha = .723$, Global positive representation $\alpha = .840$, Behavioral $\alpha = .801$, Emotional $\alpha =$

.750, Misfit $\alpha = .545$, Global negative representation $\alpha = .806$). Considering that the Misfit dimension had poor internal consistence and was composed by two of the attributes that the youth had more difficulty understanding, this dimension should be interpreted with caution.

Considering that a small number of items per factor can lead to lower alpha coefficients, we additionally calculated the mean inter-item correlations for these factors. The mean inter-item correlations of these factors fall in the acceptable range .15 to .50 (Clark & Watson, 1995) (Social .52, Competence .43, Relational .47, Global Positive .32, Behavioral .40, Emotional .43, Misfit .38, and Global Negative .26). Additionally, the item-total correlation varied between .328 and .747. The only dimension with poor values (i.e., below .300) was the Global negative self-representation with a minimum item-total correlation of .281 (for the item neglected).

Descriptive and correlations between dimensions

All dimensions presented adequate variability (see Table 5) with values ranging from approximately the minimum and maximum values of the dimensions and standard deviations near 1 point. The skewness and kurtosis values showed that they were not far from normal distribution. Again, values less than 2 for univariate skewness and 7 for univariate kurtosis were used as criteria for evaluating univariate normality (Curran, West, & Finch, 1996).

- Insert Table 5 -

We conducted a repeated measure ANOVA to test the difference between these dimensions and verified that they are all significantly different between them ($F(5,4175) = 1439.206$, $p < .001$). As such this sample of youth in care described themselves mostly as sociable, competent and loved, than as having behavior, emotional and misfit problems. The percentiles indicated that at least 75% of the sample had values higher than 3 on the positive dimensions of self-representation, and bellow 3 on the negative dimensions (except on the Behavioral). Additionally, Social, Competence, Relational, and Global positive self-representation dimensions had means significantly above the scale mid-point (3) (Social, $t(846) = 53.91$, $p < .001$; Competence, $t(847) = 27.50$, $p < .001$; Relational, $t(847) = 29.33$,

$p < .001$; Global positive, $t(847) = 45.13$, $p < .001$). The Behavioral, Emotional, Misfit and Global negative self-representation dimensions had means significantly below the scale mid-point (3) (Behavior, $t(847) = -17.29$, $p < .001$; Emotional, $t(846) = -25.83$, $p < .001$; Misfit, $t(836) = -42.89$, $p < .001$; Global negative, $t(847) = -39.14$, $p < .001$). This indicates that, on average, this sample has a global positive self-representation and does not have a global negative self-representation.

As shown in Table 6, the dimensions Social, Competence, and Relational were positively correlated; these dimensions were also correlated with the Global positive self-representation factor. The Behavioral, Emotional and Misfit dimensions and Global negative representation factor were positively correlated. Furthermore, the positive dimensions (Social, Competence, Relational and Global positive representation) were negatively correlated to the negative dimensions (Behavioral, Emotional, Misfit and Global negative representation). The only dimensions that were not correlated were the Relational and Behavioral dimensions.

- Insert Table 6 -

Self-representation correlation with mental health

To test the construct validity of SRQYRC we analyzed its correlation with mental health outcomes. It was expected that youth with better self-representations would have better mental health and that the youth with worse self-representations have a worse mental health (e.g., Mann, Hosman, Schaalma, & Vries, 2004; Nishikawa, Sundbom, & Häggglöf, 2010).

As expected youth with a better self-representation i.e., that describe themselves as more sociable, competent and loved were the ones that had fewer internalizing, social, thought and attention problems. Youth with a worse self-representation i.e., who describe themselves as having more behavioral, emotional and misfit problems were the ones that had more internalizing, externalizing, social, thought, attention and other problems (Table 7). The correlations between negative self-representation and mental health problems were slightly more widespread and stronger than the

negative correlations between positive self-representation and mental health problems. However, all these correlations are weak to very weak.

- Insert Table 7 –

Self-representation and youth characteristics

T-test, ANOVA and multiple linear regression analyses were used to analyze gender, number of previous placements, age, and length of placement differences on self-representation scores.

Regarding gender significant differences were found on Competence ($t(814) = 2.030$, $p = .043$, 95% CI [.003, .202], Cohen's $d = .142$), Behavioral ($t(814) = -2.914$, $p = .004$, 95% CI [-.268, -.052], Cohen's $d = -.204$), Emotional ($t(813) = -7.156$, $p < .001$, 95% CI [-.522, -.298], Cohen's $d = -.502$) and Global negative self-representation ($t(814) = -4.418$, $p < .001$, 95% CI [-.265, -.102], Cohen's $d = -.310$) dimensions. The differences found have small effects sizes, except the Emotional self-representation, which has a medium effect size. Female youth described themselves as less competent ($M = 3.62$, $SD = .73$) and as having more behavior ($M = 2.62$, $SD = .80$) and emotional problems ($M = 2.47$, $SD = .83$), and had a more global negative self-representation ($M = 2.29$, $SD = .59$) than male youth ($M = 3.72$, $SD = .73$; $M = 2.46$, $SD = .77$; $M = 2.06$, $SD = .81$; $M = 2.11$, $SD = .59$, respectively). No significant differences were found on self-representation scores as a function of having been previously in other institution.

The continuous variables age, current length of placement and total length of placement were positively correlated (age and total length $R^2 = .388$, $p < .001$; age and current length $R^2 = .374$, $p < .001$; total and current length $R^2 = .734$, $p < .001$), and the number of previous placements was positively correlated to total length of placement ($R^2 = .368$, $p < .001$) but negatively correlated to current length of placement ($R^2 = -.144$, $p < .001$). Since these variables are correlated, we conducted a multiple linear regression, adding all the variable at the same time in the regression models in order to control these variables and minimize potential spurious relations.

Significant effects were found regarding the age. The number of previous placements, the current length of placement and the total length of placement had no significant effects on the youth self-representation. Regarding the age effects, we verified that older participants described themselves as more competent ($t = 4.120$, $p < .001$, $\beta = .170$) and as having more emotional problems ($t = 2.020$, $p = .044$, $\beta = .085$) compared with younger participants.

Discussion

Considering the lack of research and self-representation measures of youth in residential care, the main aim of this study was to present the development and validation of a self-representation questionnaire for youth in residential care (SRQYRC).

The SRQYRC is a valid and reliable instrument to measure youth self-representation in care. It organizes self-representation in a multidimensional hierarchical model, with different dimensions correlated to second order factors. The final model is composed of 23 items, organized in six dimensions (Social, Competence, Relational, Behavioral, Emotional, and Misfit) and two second order factors (Global positive self-representation, Global negative self-representation) that reflect the self-representation of youth on positive social, competence and relational attributes, and on negative behavioral, emotional, and misfit attributes. Some of the dimensions found in this measure are consistent with the dimensions identified in self-concept research; namely the social, behavioral, competence, and affect/relational dimensions/domains (Keith & Bracken, 1996). The self-representation dimensions found in this study are similar to the self-representation dimensions found with youth not in care (Martins, 2012), but retain dimensions used by the general population to describe the social images of youth in care (Calheiros, Garrido, Lopes, & Patrício, 2015). The structure obtained with this sample confirms the necessity of developing a specific measure of self-representation for youth in residential care. Indeed, some studies indicate that youth in care are subject to the stigmatization of being a child in care (Kools, 1997) and labeled with negative social images

that characterize them mostly with externalizing problems (Calheiros et al., 2015), and that the social image regarding youth placed in care and not in care are different⁴. As such, the internalization of these images on youth's self-representation may also be different and require specific measures of assessment.

Overall, the measure presented acceptable to good internal consistence, except on the Misfit dimension. Considering that the attributes of the misfit dimension are among the ones that the youth had more difficulty understanding, in future studies it would be interesting to review the attributes (e.g., with possible synonyms or standard written definition near the attributes) of this dimension in order to evaluate if it remains a separate dimension and becomes more consistent.

This measure also showed adequate construct validity, since it is related to mental health in the expected way. Although the correlations between self-representation and mental health are weak to very weak, the results indicated that caregivers evaluated youth with better self-representations as having fewer internalizing, social, thought and attention problems; and evaluated youth with worse self-representations as having more internalizing, externalizing, social, thought, attention and other problems. This result is consistent with the studies demonstrating that youth with higher levels of self-esteem have lower levels of psychological distress (Dang, 2014), and that self-concept is directly and negatively related to adolescent reports of internalizing and externalizing problems (Hsieh & Stright, 2012; Schwartz et al. 2006). Therefore, self-representation can function as a protective factor leading to better health and social behavior; acting as a buffer against the impact of negative influences. On the other hand, a negative self-representation can function as a risk factor because poor self-esteem is associated with internalizing (e.g. depression, suicidal tendencies, eating disorders and anxiety) and externalizing problems (e.g. violence and substance abuse) (Mann, Hosman, Schaalma, & Vries, 2004). A study suggests that internalizing and externalizing problems are reciprocally reinforcing, that

⁴ Garrido, M. V., Patrício, J. N., Calheiros, M. M., & Lopes, D. (Unpublished results). Comparing the social images of youth in and out of residential care. Submitted manuscript.

negative self-concept intensifies internalizing and externalizing problems, and that these problems have a negative impact on one's self-concept (Lee & Stone, 2012).

This study demonstrated that gender and age have an effect on self-representations. The female youth perceived themselves as less competent and as having more behavior and, mainly, emotional problems than the male youth. The female youth also presented a more global negative self-representation than the male youth. These results indicate that globally males had better self-representations, which may protect them from internalizing and externalizing problems. These results are similar to previous studies indicating that boys tend to have slightly higher global self-concept scores than girls (e.g., Bolognini, Plancherel, Bettschart, & Halfon, 1996). Regarding the age, the older participants perceived themselves as more competent, but simultaneously described themselves as having more emotional problems than younger participants. These results are consistent with studies showing that there is a decline in positive self-perception on early adolescence and a recovery on middle adolescence (Marsh, 1989; Sánchez-Sandoval, 2015). According to Crain (1996) the decline in early adolescence may be related to the fact that children have unrealistic high self-concepts, and this decline suggests a more realistic objective view of the self in some self domains; or may be associated to the fact that early adolescence is marked by biological, psychological and social developments, which may be potentially challenging and disruptive to adolescents functioning in this transitional period (Ellis, Marsh, & Craven, 2005). On the other hand, the higher emotional problems perception on the older participants may reflect the increase of self-complexity (Damon & Hart, 1988). The self-concept becomes increasingly multidimensional and differentiated, and self-descriptions become more focused on the interior psychological world comprising increasingly more interpersonal characteristics and emotions (Rosenberg, 1986). These gender and age effects on self-representations should be considered when working with youth in care, in order to meet their specific needs.

Finally, the length of placement and the number of previous placements did not have effect on the youth's self-representation, when age was controlled for in the analysis. Generally, the research indicates that placement breakdowns and instability have a detrimental effect on foster youth (e.g., on internalizing and externalizing behavior) (Newton, Litrownik, & Landsverk, 2000), and that the longer children remain in care, the more placements they are likely to have and the greater the risk to their overall health and well-being (Barbell & Freundlich, 2001). Nevertheless, some studies demonstrate that the length of stay in high quality residential care may have a protective effect on some outcome dimensions (e.g., better educational outcomes, Ringle, Ingram, & Thompson, 2010). Thus, more than the length of placement this suggests that the quality of the care is more important to analyze the impact of the residential care characteristics on the youth's self-representation. For example, the stability of placement, the work developed with the youth to improve their identity, the opportunities of education and training, the opportunities of social and civic engagement, adequate health and mental health supports, and supportive relationships (Del Valle, Bravo, Alvarez, & Fernanz, 2008; Jim Casey Youth Opportunities Initiative, 2011) are residential care characteristics that may be protective and have an impact on youth's self-representation.

We expected that the youth in care had a negative self-representation, due to the negative social images about youth in residential care and their previous negative experiences that may have affected their self-representation, hindering the establishment of a positive self-concept (Kools, 1997). Indeed, complex trauma exposure has been linked to disruptions on cognition, self-concept and negative self-image (Cook et al., 2005; Knoverek et al., 2013; Spinazzola et al., 2005; van der Kolk et al., 2005). However, in this study the youth in care globally describe themselves with positive self-representation dimensions and not with negative dimensions. Although in this study the self-representation of youth in residential care was positive, in future studies it would be important to compare it with the self-representations of youth in other contexts (e.g., in comparison with other groups, youth in care self-representation may be worse). The few studies found on this issue show that

youth in care have a worse self-concept, especially on intellectual, academic and behavior dimensions, than youth in general (Magalhães & Lopes, 2011).

Moreover, it would be important to study what individual and contextual pre-care and during care variables have impact on the development of a positive self-representation, in particular when specific interventions are developed with youth in care. There is evidence of different intervention models on youth self-concept improvement in foster care (e.g., Therapeutic Foster Care) (Dinges et al., 2008) and residential care (e.g., Positive Peer Culture) (James, 2011). Attachment, Self-Regulation, and Competency is another framework for intervention with youth who have experienced complex trauma and that may be relevant to increase the youth adjustment and resilience (Hodgdon, Kinniburgh, Gabowitz, Blaustein, & Spinazzola, 2013).

Similar to other self-report questionnaires, this measure has some disadvantages: not all participants can or do make reliable self-report judgments. Self-report judgements are subject to manipulated and social desirability responses and limited by youth's comprehension, verbal and reading skills.

Nevertheless, this measure has several advantages. It is easy and cheap to administer. It is easy to read and understand since the items are attributes rather than phrases. It provides easy access to the information stored in memory over time allowing a quick and spontaneous response. Additionally, it was developed specifically for youth in care (integrating attributes socially associated to this group), so it can be used to understand and identify the intervention needs on youth's self-representation development, which may be a protective factor at different levels.

Conclusions

The SRQYRC is a valid and reliable instrument to measure self-representation of youth in care. This measure can be used for research purposes but also to analyze youth's self-representation and in what domains a better self-representation can be supported. Furthermore, the relationship between mental health and self-representation, specifically, the potential protective role of self-

representation highlights the need for future studies on youth in care to focus on this issue and fill the lack of research in this area.

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TABLES

Table 1. Items descriptive statistics

	N	Missings	Min	Max	M	SD	Ske	Kur
Friend	839	9	1	5	4,36	0,71	-0,85	0,28
Clean	844	4	1	5	4,35	0,74	-1,00	0,96
Nice	843	5	1	5	4,21	0,79	-0,67	-0,12
Helpful	826	22	1	5	4,10	0,85	-0,82	0,68
Funny	846	2	1	5	4,04	0,80	-0,42	-0,24
Affectionate	840	8	1	5	4,00	0,92	-0,76	0,40
Fighter	837	11	1	5	3,90	1,04	-0,85	0,27
Protected	840	8	1	5	3,89	1,02	-0,80	0,21
Responsible	829	19	1	5	3,89	0,90	-0,46	-0,12
Loved	832	16	1	5	3,87	1,04	-0,77	0,14
Organized	843	5	1	5	3,83	1,04	-0,61	-0,14
Cherished	833	15	1	5	3,79	1,02	-0,75	0,27
Courageous	839	9	1	5	3,77	0,96	-0,49	-0,05
Hard-working	842	6	1	5	3,76	0,94	-0,44	-0,03
Clever	826	22	1	5	3,71	1,00	-0,46	-0,11
Beautiful	829	19	1	5	3,69	1,18	-0,61	-0,40
Intelligent	839	9	1	5	3,69	0,94	-0,43	0,01
Committed	835	13	1	5	3,67	0,92	-0,31	-0,10
Competent	830	18	1	5	3,62	1,05	-0,65	0,12
Stubborn	843	5	1	5	3,37	1,19	-0,32	-0,57
Recalcitrant	837	11	1	5	2,96	1,24	-0,01	-0,83
Angry	833	15	1	5	2,43	1,13	0,42	-0,43
Sad	841	7	1	5	2,39	1,10	0,37	-0,58
Unmotivated	835	13	1	5	2,36	1,07	0,45	-0,34
Aggressive	843	5	1	5	2,33	1,11	0,44	-0,54
Depressed	837	11	1	5	2,27	1,06	0,38	-0,66
Messy	838	10	1	5	2,25	1,10	0,52	-0,36
Traumatized	824	24	1	5	2,22	1,15	0,61	-0,49
Misbehaved	842	6	1	5	2,21	1,04	0,43	-0,47
Conflicting	837	11	1	5	2,17	1,06	0,62	-0,25
Problematic	843	5	1	5	2,13	1,07	0,72	-0,11
Lonely	837	11	1	5	2,12	1,10	0,67	-0,40
Low self-esteem	833	15	1	5	2,11	1,16	0,92	-0,01
Ugly	832	16	1	5	1,93	1,09	1,08	0,52
Misfit	827	21	1	5	1,90	1,02	1,09	0,73
Abandoned	830	18	1	5	1,70	0,97	1,52	2,00
Neglected	819	29	1	5	1,65	0,92	1,64	2,73

Table 2. Rotated component matrix loadings

	Component							
	Social	Behavioral	Competence	Emotional	Relational	Instrumental	Misfit	Physical
Nice	,824							
Friend	,750							
Helpful	,686		,303					
Affectionate	,668				,429			
Funny	,590							,321
Aggressive		,762						
Recalcitrant		,753						
Misbehaved		,698						
Conflicting		,675						
Problematic		,670						
Stubborn	,348	,618						
Intelligent			,684					,376
Hard-working			,665			,323		
Committed			,652					
Competent			,652		,326			
Clever	,305		,610					,355
Depressed				,806				
Traumatized				,754				
Sad				,714				
Lonely				,609				
Cherished					,752			
Protected					,696			
Loved					,652			
Messy						-,761		
Organized						,744		
Clean						,554		
Low self-esteem							,723	
Misfit							,692	
Neglected							,555	
Ugly								-,761
Beautiful	,306							,713
Eigenvalue	6,88	3,71	2,62	1,44	1,34	1,30	1,11	1,04
% of variance	22,19	11,96	8,45	4,66	4,33	4,18	3,58	3,35
Cronbach alpha	.841	.804	.782	.763	.704	.577	.604	.747

Table 3. Model fit indexes

Model	X/df	CFI	TLI	RMSEA	AIC	BIC
A	2.994	.822	.796	.069	32418.685	32906.688
B	3.157	.838	.814	.072	26260.366	26619.311
C	2.135	.919	.907	.052	23933.656	24248.237
D	2.418	.899	.884	.058	23996.218	24310.799
E	2.031	.927	.916	.050	23910.730	24229.343

Table 4. Standardized estimates

	Standardized Estimate	Sig
Social		
Funny	0.497	< .001
Nice	0.869	< .001
Friend	0.840	< .001
Helpful	0.772	< .001
Behavioral		
Conflicting	0.713	< .001
Aggressive	0.655	< .001
Problematic	0.762	< .001
Misbehaved	0.609	< .001
Recalcitrant	0.559	< .001
Stubborn	0.376	< .001
Competence		
Hard-working	0.595	< .001
Committed	0.548	< .001
Competent	0.589	< .001
Intelligent	0.740	< .001
Emotional		
Traumatized	0.570	< .001
Depressed	0.723	< .001
Lonely	0.672	< .001
Sad	0.629	< .001
Relational		
Loved	0.739	< .001
Cherished	0.694	< .001
Protected	0.687	< .001
Misfit		
Neglected	0.436	< .001
Misfit	0.796	< .001
Global Negative SR		
Behavioral	0.593	< .001
Emotional	0.746	< .001
Misfit	0.678	< .001
Global Positive SR		
Social	0.839	< .001
Competence	0.771	< .001
Relational	0.607	< .001

Table 5. Dimensions descriptive statistics

	N	Min	Max	M	SD	Ske	Kur	P25	P50	P75
Social	847	1,67	5,00	4,18	0,64	-0,56	-0,07	3,75	4,25	4,75
Competence	848	1,00	5,00	3,68	0,72	-0,15	-0,01	3,25	3,75	4,25
Relational	848	1,00	5,00	3,84	0,84	-0,59	0,11	3,33	4,00	4,33
Global Positive	848	1,58	5,00	3,90	0,58	-0,27	0,07	3,50	3,92	4,31
Behavioral	848	1,00	5,00	2,53	0,79	0,24	-0,27	2,00	2,50	3,00
Emotional	847	1,00	5,00	2,25	0,84	0,36	-0,24	1,50	2,25	2,75
Misfit	837	1,00	5,00	1,78	0,82	1,07	1,19	1,00	1,50	2,00
Global Negative	848	1,00	4,53	2,19	0,60	0,37	0,08	1,72	2,19	2,56

Table 6. Correlation between dimensions

	Social	Competence	Relational	Global Positive	Behavioral	Emotional	Misfit
Competence	,482**						
Relational	,470**	,390**					
Global Positive	,790**	,778**	,812**				
Behavioral	-,102**	-,167**	-,013	-,113**			
Emotional	-,163**	-,080*	-,147**	-,162**	,318**		
Misfit	-,199**	-,090**	-,185**	-,199**	,228**	,349**	
Global Negative	-,215**	-,154**	-,158**	-,216**	,694**	,771**	,725**

* p < .05 ** p < 0.01

Table 7. Correlations between self-representation and mental health

	Social	Competence	Relational	Global Positive	Behavioral	Emotional	Misfit	Global Negative
Anxious/depressed	-,099**	-,051	-,078*	-,095**	,126**	,243**	,066	,196**
Withdrawn/depressed	-,173**	-,102**	-,164**	-,184**	-,004	,195**	,119**	,139**
Somatic complaints	-,034	-,035	-,059	-,055	,145**	,217**	,029	,176**
Internalizing	-,136**	-,089*	-,136**	-,150**	,124**	,286**	,107**	,232**
Rule-breaking behavior	-,061	-,074*	-,011	-,058	,278**	,006	,114**	,177**
Aggressive behavior	-,080*	-,048	-,015	-,056	,360**	,109**	,082*	,247**
Externalizing	-,068	-,063	,004	-,048	,360**	,071	,100**	,239**
Social problems	-,095**	-,080*	-,039	-,087*	,177**	,219**	,099**	,222**
Thought problems	-,147**	-,068	-,138**	-,148**	,174**	,149**	,092*	,181**
Attention problems	-,143**	-,184**	-,031	-,144**	,276**	,124**	,095**	,218**
Other problems	,010	-,052	,015	-,010	,257**	,109**	,063	,190**
Total	-,111**	-,131**	-,053	-,119**	,314**	,185**	,127**	,281**

* $p < .05$ ** $p < 0.01$