

**Assessing occupational stress in residential youth care settings:
Validation study of the Stress Questionnaire for Residential Youth
Care Professionals**

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Occupational stress is commonly experienced by professional caregivers working in Residential Youth Care (RYC), due to the psychological demands of their work. Although the influence of stress has been studied on this helping profession, there is still no measurement tool to assess the potential sources of stress for these professionals. This study aimed to validate the Stress Questionnaire for Residential Youth Care Professionals (Stress-RYCaregivers), a self-report questionnaire assessing different sources of occupational stress experienced by RYC professionals. Dimensionality and psychometric properties were investigated using a sample of 360 professional caregivers (88.6% female) working in 41 residential care facilities. A confirmatory factor analysis indicated that the 25 items grouped into six factors (i.e., Caring of Children and Young People, Work overload, Career progression and salary, Relationships at work, Training activities and Home-work interface). All subscales showed adequate internal consistency and test-retest reliability. Construct validity in relation to external variables was also found. Significant differences in stress sources were found concerning personal and work variables. Understanding the causes of stress is the first step to prevent it, which may impact in the caregivers' quality of life, in the care provided, and, ultimately, in the quality of life of children in RYC.

Keywords: occupational stress; caregivers; residential youth care; dimensionality; psychometrics.

Practice implications

- The Stress-RYCaregivers assesses six sources of occupational stress.
- All subscales showed adequate internal consistency and test-retest reliability.
- Differences in stress sources were found in personal (age, educational level) and work (professional role, years of service) variables.
- Caregivers' well-being should be considered as an area of concern by organizations.
- Caregivers should receive training to deal with stress, as well as supervision and teamwork based on mutual support.

Introduction

Occupational stress is frequently experienced by professional caregivers working in Residential Youth Care (RYC) (Middleton & Potter, 2015), with implications for their well-being and the quality of care (Baugerud et al., 2018; Sprang et al., 2011).

Considering that youth living in RYC are recognized as a high-risk group for mental health disorders due to their previous adverse experiences (Campos et al., 2019), occupational stress of care professional can deteriorate the quality of care and result in a child's trauma being re-enacted during their placement (Bailey et al., 2019; Baugerud et al., 2018). Additionally, better outcomes in RYC have been found to be associated with the psychological and emotional availability of caregivers (Bailey et al., 2019; Esaki et al., 2013). Thus, it seems relevant to be able to assess potential sources of stress of professional caregivers working within RYC, in order to alleviate and/or prevent it. Research suggests that most youth in RYC were exposed to multiple traumatic life experiences, exhibiting clinically relevant development, social, and mental health concerns (Campos et al., 2019; Teicher & Samson, 2016). In the daily intervention in RYC, professional caregivers are responsible for offering adequate support and education, considering youth biopsychosocial development and individual needs. Provided care may include the promotion of autonomy skills, ensuring youths' daily routine, counseling, establishing contact with community services, working with families, as well as providing a secure environment (Krueger, 2007; Seti, 2008). Better outcomes in RYC have been associated with the psychological and emotional availability of the caregivers to establish a good relationship (Bailey et al., 2019). Yet, their emotional availability to serve as adequate attachment figures can be impaired due to stress and exhaustion (Esaki et al., 2013).

Working in RYC can be challenging, as professional caregivers are daily exposed to multiple stressors, in an unpredictable work environment (Barford &

Whelton, 2010; Lizano & Mor Barak, 2012; Raskin et al., 2015; Smith et al., 2019). Stressors may include not only assisting highly traumatized youth and hearing about their traumatic experiences, but also coping with frequent episodes of threatening and aggressive behaviors perpetrated by youth who externalize their trauma, are resistant to their placement and/or to the rules of the RYC (Barford & Whelton, 2010; Kind et al., 2018; Middleton, & Potter, 2015; Molnar et al., 2017; Seti, 2008; Smith et al., 2019). Additionally, these professionals usually have heavy workloads due to child-to-caregiver ratios, work in shifts, have limited autonomy, insufficient resources, lack of career advancement opportunities and training, low salaries, lack of support from colleagues and managers, and experience negative effect on their family life (Del Valle et al., 2007; Hermon & Chahla, 2019; Krueger, 2007; Lizano & Mor Barak, 2012; Middleton, & Potter, 2015; Seti, 2008; Smith et al., 2019).

All of these demands of RYC settings seem to contribute to high levels of occupational stress of these professionals (Middleton, & Potter, 2015; Obermann, 2017; Sprang et al., 2011), that can be defined as a negative physical and emotional response occurring when work requirements do not match the individual's abilities or resources (Del Valle et al., 2007). Chronic stress exposure alters stress responses, with impairments at the psychological (e.g., impaired emotional well-being, mental health problems), physical (e.g., immune function, poor health), social (e.g., burden in interpersonal functioning) and professional (e.g., turnover, team morale, quality of care) domains (Del Valle et al., 2007; Kind et al., 2018; Lizano & Mor Barak, 2012; Maslach et al., 2001; Middleton, & Potter, 2015; Obermann, 2017).

Without adequate resources to cope with chronic occupational stressors, different types of stress responses and psychological syndromes may arise, such as burnout (Boyas et al., 2012; Maslach et al., 2001; Seti, 2008), secondary traumatic

stress (STS; Bride et al., 2007), depression and anxiety (Adams et al., 2006; Conrad & Kellar-Guenther, 2006; Raskin et al., 2015), which have been showed to be frequent in professional caregivers working in RYC (Hermon & Chahla, 2019; Lizano & Mor Barak, 2012; Seti, 2008; Sprang et al., 2011; Steinlin et al., 2017). Although highly stressful, taking care of youth in vulnerable circumstances can be, at the same time, one of the most satisfying and rewarding professions (Hermon & Chahla, 2019). The sense of pleasure, accomplishment, and competence felt by a helping professional, when able to effectively help those in need, is recognized as compassion satisfaction (Bride et al., 2007; Stamm, 2010), which has been suggested to buffer occupational stress and related psychological syndromes (Baugerud et al., 2018; Conrad & Kellar-Guenther, 2006; Samios et al., 2013; Stamm, 2010). Furthermore, both personal and work-related features seem to influence the levels of stress (Boyas et al., 2012; Stamm, 2010). Regarding personal characteristics, research suggests that younger caregivers report higher levels of occupational stress and related conditions (Boyas et al., 2012; Craig & Sprang, 2010; Del Valle et al., 2007; Lizano and Mor Barak, 2012; Sprang et al., 2011), and caregivers with the higher education levels present more stress (Del Valle et al., 2007). Concerning work-related characteristics, research suggests that more time in direct contact with youths is related to higher levels of stress (Bloomquist et al., 2016), but more years of work experience is related with less occupational stress (Craig & Sprang, 2010; Del Valle et al., 2007).

The demanding nature of RYC work might not only have a significant impact over caregivers' quality of life, but also deteriorate the quality of care provided to already vulnerable youth (Conrad & Kellar-Guenther, 2006; Hermon & Chahla, 2019; Middleton, & Potter, 2015; Seti, 2008; Sprang et al., 2011; Steinlin et al., 2017).

Although there are psychometrically sound self-report measures to assess the impact of stress on professionals in different settings (e.g., nurses, teachers, and social workers), they address generic measures of stress and related conditions (e.g., compassion fatigue, burnout) (e.g., Adams et al., 2006; Cohen et al., 1983; Faragher et al., 2004; Stamm, 2010). The available instruments were validated to specific settings and professionals, impairing its use with the professionals of the RYC, which is a very unique profession in its duties and scope of action (Hermon & Chahla, 2019). Additionally, different outcomes may arise from generic measures when compared to measures that includes specific domains of occupational stress and may imply the use of complementary instruments whenever more specificity is needed (Gomes & Teixeira, 2016; Hermon & Chahla, 2019). Since the existing literature is mostly focused in the use of generic measures, Hermon & Chahla (2019) proposed a multidimensional stress measure for child welfare workers (CWW). However, this measure was validated with a sample of retained specially-trained former students, who may be different from the broader population of CWW. In addition, CWW and RYC staff have different tasks, thus the sources of stress might also be different.

In sum, it seems relevant to validate a measurement tool capable to assess specific domains of occupational stress in RYC settings. This will help to better understand the prevalence and effects of different dimensions of occupational stress among professional caregivers. Understanding the causes of stress is the first step for taking action to prevent and/or mitigate it, which may impact in the caregivers' quality of life, in the care provided, and, ultimately, in the quality of life and mental health of children and youth placed in RYC facilities.

The current study adapted the Stress Questionnaire for Health Professionals (SQHP; Gomes, 2014; Gomes & Teixeira, 2016) and validated it to Residential Youth

Care Professionals: Stress Questionnaire for Residential Youth Care Professionals (Stress-RYCaregivers). The SQHP was chosen, since its dimensions are in line with the sources of stress referred in the literature as the most commonly experienced by residential caregivers (Barford & Whelton, 2010; Del Valle et al., 2007; Hermon & Chahla, 2019; Krueger, 2007; Lizano & Mor Barak, 2012; Middleton, & Potter, 2015; Seti, 2008; Smith et al., 2019). The Stress-RYCaregivers self-report measure may be useful to assess and better understand the specific sources of stress within RYC settings, while providing clues to improve the professional quality of life of these professionals. The current work presents the Stress-RYCaregivers' dimensionality study and psychometric properties. The relation between stress sources with personal and work variables was also examined. As the original scale (Gomes & Teixeira, 2016), it is expected that the Stress-RYCaregivers presents a six-factor structure, appropriate levels of internal consistency and test-retest reliability. Positive correlations are expected with measures of Burnout, STS, Anxiety, Depression, and Stress; negative correlations are expected with Satisfaction with Life and with Compassion Satisfaction. In agreement with previous research, personal and work-related variables, such as younger age, less years of service and higher education level are expected to be associated with higher levels of occupational stress (Boyas et al., 2012; Craig & Sprang, 2010; Del Valle et al., 2007; Sprang et al., 2011). Also, professionals that provide direct care to youth are expected to present higher levels of occupational stress (Bloomquist et al., 2016).

Methods

Participants

Participants were 360 professional caregivers (88.6% female), aged between 20 and 76 years old ($M = 41.67$; $SD = 11.20$), working in 41 Portuguese residential care homes

(RCH)¹, with an average of 10.26 years (range = 0-45; *SD* = 8.82) of professional experience. The sample comprised technical (33.6%; e.g., technical director, psychologist, social worker), educational (56.4%; e.g., educational assistant) and support staff (10%; e.g., cleaning staff, cooker). Half of the caregivers (54.3%) reported working in shifts, during an average period of 8.39 years (range = 0-32; *SD* = 7.58). Concerning the educational level, 52.7% of the participants had university degree, 26,1% reported having completed high school (i.e., 12 years of school), and 21.3% some level of elementary or middle school education (i.e., 4-9 years of school attendance). Regarding the marital status, the majority of the participants were married (54.9%), while 33.9% were single, 10.1% were divorced, and 1.1% were widowers. Some participants (23.3%) reported that they were receiving or had already received psychological or psychiatric help, due to personal (56.6%), professional (8.4%), both personal and professional (31.3%), and other (3.6%) reasons, with 10% being currently taking medication for mental health problems.

To study test-retest reliability, the Stress-RYCaregivers was filled out again (approximately one month and a half after the first data collection) by a subsample of 81 professional caregivers (85.2% female), aged between 22 and 64 years old (*M* = 43.91; *SD* = 10.66), from 11 Portuguese RCHs. In average, caregivers from this subsample had worked in RYC for 10.04 years (range = 0–30; *SD* = 7.92) and 51.9% integrated the educational team, 29.6% were from the technical team, and the remaining 16% from the support team.

¹ In Portugal, RCHs have the main aim of temporary protection of youth at-risk. Most placements (87%) are due to maltreatment (neglect and/or psychological, physical and/or sexual abuse), and the remaining are related with abandonment by caregivers or with the absence of family support (ISS, 2021). RCHs included in this study are open facilities, which vary in the number of children and youngsters fostered and may be mixed or segregated by gender. Each RCH has technical (case managers), educational (ensure the daily routine and care provision), and support (cooking and cleaning) professionals. Despite their different roles, all professionals are directly involved in the delivery of services to children and adolescents on a regular basis within each RCH.

Measures

Stress Questionnaire for Residential Youth Care Professionals (Stress-RYCaregivers; original version Gomes, 2014; Gomes & Teixeira, 2016; adapted by Santos et al., 2021).

This instrument aims to evaluate the sources of stress that RYC professionals face in their work. It was adapted from the Stress Questionnaire for Health Professionals (SQHP; Gomes, 2014; Gomes & Teixeira, 2016; cf. the Procedures subsection), which evaluates the sources of stress that health professionals face in their activities. The SQHP comprises two parts: the first one assesses the global level of stress experienced during the professional activity, through a single item; the second part assesses the potential sources of stress to which these professionals are subjected, through 25 items grouped into six subscales: working with clients; work overload; career progression and salary; relationships at work; leading training activities, and home-work interface. The SQHP's factor structure presents an acceptable fit for a six-factor model, with all subscales achieving adequate internal consistency level (composite reliability > .70). Items of both parts measure the intensity of stress on a five-point Likert-type scale (0 = No stress; 4 = High stress) (Gomes & Teixeira, 2016).

The Stress-RYCaregivers also comprises two parts. The first part consists of 1 item assessing the overall level of stress experienced in work activity. The second part assesses the potential sources of stress associated with professional activities in the RYC setting, being composed by 25 items distributed across the six dimensions: 1) caring for children and young people (4 items); 2) work overload (4 items); 3) career progression and salary (5 items); 4) relationships at work (5 items); 5) training activities (3 items); 6) home-work interface (4 items). As the SQHP, items are rated using a five-point Likert-type scale (0 = No stress; 4 = High stress).

The Professional Quality of Life Scale, version 5 (ProQOL-5; Stamm, 2010, Portuguese version by Carvalho, 2011).

The ProQOL is a 30-item self-report measure composed by three subscales: compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS). Participants are instructed to indicate how frequently each item was experienced in the previous 30 days, using a five-point Likert-type scale (1 = never, 5 = very often). The original version reported internal consistency values of .88 for CS, .75 for BO, and .81 for STS (Stamm, 2010). The Portuguese version also showed good internal consistency of .86 for CS, .71 for BO, and .83 for STS (Carvalho, 2011). In this study, Cronbach's alphas were .85 for CS, .73 for BO and .70 for STS.

Depression, Anxiety and Stress Scales (DASS-21; Lovibond & Lovibond, 1995; Portuguese version by Pais-Ribeiro et al., 2004).

DASS-21 is a 21-item self-report scale designed to assess symptoms of depression, anxiety and stress. Participants are asked to rate how much each statement applied to them over the previous week, using a four-point Likert-type scale (0 = did not apply to me at all, to 3 = applied to me very much or most of the time). On the original version, the DASS-21 subscales presented high internal consistency: Depression $\alpha = .91$, Anxiety $\alpha = .84$ and Stress $\alpha = .90$ (Lovibond & Lovibond, 1995). The Portuguese version showed good internal consistency (Depression $\alpha = .85$, Anxiety $\alpha = .74$ and Stress $\alpha = .81$) and good convergent and discriminant validity (Pais-Ribeiro et al., 2004). In this study, the internal consistency values were .85, .83 and .87 for Depression, Anxiety and Stress subscales, respectively.

Satisfaction with Life Scale (SWLS; Diener et al., 1985; Portuguese version by Simões, 1992).

The SWLS is a five-item scale that measures satisfaction with life. Each item is scored using a seven-point Likert-type scale (1 = strongly disagree, to 7 = strongly agree).

Cronbach's alpha was .87 in the original version (Diener et al. 1985) and .77 in the Portuguese version (Simões, 1992). In the current study the Cronbach's alpha was .86.

Procedures

Scale development

The Stress Questionnaire for Residential Youth Care Professionals (Stress-RYCaregivers) was adapted from the Stress Questionnaire for Health Professionals (SQHP; Gomes, 2014; Gomes & Teixeira, 2016). After obtaining approval from the author of the original scale, some items terminology was adapted from the health (original setting) to the RYC setting. Specifically, the expression “clients” was changed to “children and young people” in items composing the former Working with clients’ subscale (e.g., Item 1 - “Making decisions where mistakes can have serious consequences for children and young people.”). Likewise, the name of the subscale “Working with clients” was changed to “Caring for Children and Young People”. In Portugal, preparing training activities is not a regular practice in the daily work of care workers. Nonetheless, the subscale was kept considering that the RYC tasks might differ across countries. No further changes were need, and the remaining items of the original version were kept, as well as the same Likert-type scale.

Data collection

The ethics committee of the Faculty of [blinded] approved the study's procedures. Seventy-one generalist RCHs from Portugal mainland, listed in a national database, were contacted and informed about the study goals and procedures. Therapeutic RCHs,

specialized in mental and behavioral disorders and/or substance abuse were excluded considering its distinct features (e.g., secure facilities with specific treatment approaches). Professional caregivers from the 41 RCHs (57.75%) that accepted to participate, were invited to collaborate if they were directly involved in the delivery of services to youngsters on a regular basis. Due to the pandemic situation, data were collected in person by a researcher (when possible) or were sent by post. Study procedures were also explained to caregivers. Written informed consent was gathered from those who decided to voluntarily collaborate. Confidentiality and anonymity of responses were guaranteed.

To investigate test-retest reliability, participants from 11 RCHs were invited to fill out the Stress-RYCaregivers again, approximately, after a one month and a half after the first measurement.

Data analysis

Data were analysed with the IBM SPSS Statistic 25 and Mplus v8.0 software. The Mplus was used to perform the Confirmatory Factor Analysis (CFA). The IBM SPSS was used to perform the descriptive and psychometric analyses, and to compare groups. Sixteen participants presenting more than 20% of missing values in the Stress-RYCaregivers items were removed (Peng et al., 2006) and excluded from the sample (i.e., neither included in the description of participants nor in the analyses). Little's (1988) MCAR tests revealed that data were missing completely at random [MCAR (520) = 551.739, $p = .162$]. For participants that were kept in the study's sample, whenever there were missing values, and considering that the deletion of cases would lead to a substantial loss of subjects, missing values were replaced by 999.

Since the present scale was developed from previous research (Gomes & Teixeira, 2016), a six-factor structure was defined prior to the analyses. The adequacy

of the model was tested via CFA. The multivariate normality was analysed using the Mardia test (Korkmaz, et al., 2014), which indicated that the data did not present a normal distribution [Mardia's χ^2 skew = 4598.65, $p = 1.65$; Mardia's χ^2 kurtosis = 21.68, $p < .001$]. Consequently, the CFA was conducted using the Weighted Least Squares Means and Variance adjusted (WLSMV) estimator. For the model to be considered a good fit for the data it was considered the guidelines provided by Hair and colleagues (2009): Comparative Fit Index (CFI) $\geq .92$ combined with the Standardized Root Mean Square Residual (SRMR) $\leq .08$ or a Root Mean Square Error of Approximation (RMSEA) $\leq .07$. Items' loadings were analyzed, with values equal to or greater than .50 considered to be acceptable (Hair, et al., 2009). Construct validity in relation to external variables and test-retest reliability were examined using Spearman's correlation coefficient. Correlation values above .39 were considered weak, between .40 and .69 moderate, and higher than .70 strong (Dancey & Reidy, 2007). Internal reliability was examined using Cronbach's alpha.

Comparisons between personal and work-related variables with stress sources were computed, using the nonparametric Mann-Whitney test (to compare two groups) and the Kruskal-Wallis tests (to compare multiple groups), using pairwise comparisons with adjusted significance value (i.e., Bonferroni correction for multiple tests) to perform follow-up tests. Effect sizes were calculated by dividing Z by the square root of N ($r = Z/\sqrt{N}$) (Field, 2018), with .2 indicating a small effect, .5 a medium effect and .8 a large effect (Cohen, 1988).

Results

Factor structure and psychometric properties

In accordance with the original scale measurement model (Gomes & Teixeira, 2016), the 25 items of the Stress-RYCaregivers were submitted to CFA, as representing a six-factor model (i.e., caring of children and young people, work overload, career progression and salary, relationships at work, training activities, and home-work interface). According to a two-index approach, the CFA for the proposed six-factor model showed a good fit to the data ($\chi^2/df = 979.315/260$, $p < .001$; CFI = .937; RMSEA = .088; SRMR = .056) (Hair et al., 2009). To ensure that this model best represented the factor structure of the Stress-RYCaregivers, an alternative one-factor model was also tested, revealing unacceptable fit ($\chi^2/df = 3149.759/275$, $p < .001$; CFI = .747; RMSEA = .170; SRMR = .115) (Hair et al., 2009). Within the six-factor model, all loadings' values were significant ($p < 0.001$) and higher than 0.50, suggesting the items statistical and practical relevance in reflecting the construct they were supposed to measure (Hair et al., 2009). All factors achieved good internal consistency values ($\alpha > .80$), with exception of Training activities, which reached an acceptable value ($\alpha = .79$) (cf. Table 1).

[Table 1 near here]

The scale also showed acceptable test-retest reliability, for a one month and a half time interval, with all correlations being significant ($p < .001$) and ranging from .558 (training activities) to .825 (relationships at work) (cf. Table 2).

[Table 2 near here]

Construct validity

Table 3 displays the intercorrelations between Stress-RYCaregivers subscales. Positive and significant correlations were found between the general stress level (first part of the

Stress-RYCaregivers) and the subscales that compose the second part of the instrument. Correlations values were moderate with the following subscales: Caring for Children and Young People, Work overload, and Relationships at work. The remaining ones were weak. Correlations between the Stress-RYCaregivers subscales were mostly moderate, with exception of the following that were low: Caring for Children and Young People with Career progression and salary, Career progression and salary with Training activities, Relationships at work with Training activities.

[Table 3 near here]

Regarding construct validity in relation to external variables (cf. Table 4), positive and significant correlations were found between Stress-RYCaregivers subscales and Burnout, STS, Depression, Anxiety and Stress. Work overload and Relationships at work showed to be moderately correlated with Burnout and STS. The remaining correlations were weak.

Significant negative correlations were found between Stress-RYCaregivers subscales and Satisfaction with life, and Compassion satisfaction, achieving though a weak magnitude. Correlations between Compassion Satisfaction and Caring for Children and Young People, as well as with Training activities, did not achieve a significant level.

[Table 4 near here]

Sources of occupational stress and their relation with personal and work variables

The relationship between the different sources of stress and personal (age, educational level) and work variables (team, shifts, years of work) were analysed (cf. Tables 5 and 6). All comparisons showed small effect sizes.

[Table 5 near here]

[Table 6 near here]

Personal-related variables

Age was divided into three levels according to quartiles: up to age 34, 35 to 50, and over 50. Participants aged over 50 scored significantly lower than the professionals within the 35 to 50 age group on work overload ($p = .041$; $r = .16$) and home-work interface ($p = .030$; $r = .16$). Education levels were classified in three groups: university degree, high school, and elementary/middle school education. Groups were significantly different on Caring for children and young people, Work overload, and Home-work interface. Despite the significant overall effect on Caring for children and young people ($H(2) = 6.245$, $p = .044$), none of the specific comparisons between groups indicated a significant difference in the stress level due to different education levels. Participants with a university degree scored significantly higher in work overload ($p = .001$; $r = -.21$) and in home-work interface ($p = .030$; $r = -.15$) than participants who had completed high school.

Work-related variables

In order to ascertain the existence of differences in the level of stress perceived between different role jobs within RCH, caregivers that integrated different team works were compared. As explained before, professional caregivers participated in the current study if they were directly involved in the delivery of services to adolescents on a regular basis. For this comparison we selected only staff members who often take care of children and youth in a daily basis (i.e., educational and technical teams). Members of the technical team (i.e., psychologist, social workers) reported significantly more work overload than colleagues of educational team (direct care workers) ($U = 9573.50$, $p = .004$, $r = -.121$). Years of service in RYC was divided into three levels, as proposed in another study (Barbosa, 2020): those with up to 4 years of work, those with 5 to 15 years, and those with more than 15 years. There were differences between groups on

work overload, relationships at work, training activities and home-work interface. Specifically, the group with less years of work (up to 4 years) scored significantly lower than both those with 5 to 15 years of work and those with more than 15 years of work on work overload ($p < .001$; $r = -.31$; $p = .036$; $r = -.18$, respectively) and on training activities ($p = .004$; $r = -.19$; $p = .021$; $r = -.19$, respectively). The group with less years of work also scored significantly lower than those with 5 to 15 years of work on relationships at work ($p = .003$; $r = -.20$) and on home-work interface ($p = .004$; $r = -.15$).

Discussion

The present study includes the validation of the Stress Questionnaire for Residential Youth Care Professionals (Stress-RYCaregivers). This measure was adapted to assess the different sources of occupational stress of professional caregivers working in RYC settings. The Stress-RYCaregivers was built from the Stress Questionnaire for Health Professionals (SQHP; Gomes, 2014; Gomes & Teixeira, 2016), which formerly achieved an adequate measurement model for a six-factor solution (Gomes & Teixeira, 2016). Thus, the same measurement model was assumed for the Stress-RYCaregivers. The CFA confirmed that the 25-items presented a good fit for a six-factor model solution: Caring for children and young people, Work overload, Career progression and salary, Relationships at work, Training activities, and Home-work interface. As in the original study, the one-dimension model was also tested, yet it worsened the model fit, and the six-factor model was chosen. Findings revealed a good internal consistency for all subscales, as well as acceptable test-retest reliability for a one-month and a half time interval, which suggests that occupational stress is stable across time. These findings indicate that the Stress-RYCaregivers is a psychometric appropriate measure to assess

the potential sources of occupational stress experienced by professional caregivers working in RYC settings.

Concerning construct validity, all correlations between the general stress level (first part of the Stress-RYCaregivers) and subscales that compose the second part of the instrument were positive and significant. Caring for children and young people, Work overload and Relationships at work revealed moderate correlations, and the remaining were weak. The six subscales were also positively and moderately correlated among them. Exceptions were the associations between Caring for children and young people and Career progression and salary, Training activities both with Career progression and salary, and with Relationships at work, all of low magnitude. These findings may reflect that despite being an underpaid job (Barford & Whelton, 2010), the stress caused by providing care to vulnerable children in difficult circumstances is weakly related with payment and career progression. Considering items content, caregivers might be more worried with the quality of the care provision *per se*. In Portugal, preparing training activities is not a recurrent practice in the daily work of care workers. Therefore, this factor might not significantly influence their salary, career development or professional relationships.

Regarding construct validity in relation to external variables, positive correlations were found between Stress-RYCaregivers subscales and Burnout, STS, Anxiety, Depression and Stress. Such associations are in line with previous research, that related occupational stress with psychological distress and stress-related syndromes (Adams et al., 2006; Boyas et al., 2012; Bride et al., 2007; Conrad & Kellar-Guenther, 2006; Hermon & Chahla, 2019; Lizano & Mor Barak, 2012; Raskin et al., 2015; Seti, 2008; Sprang et al., 2011; Steinlin et al., 2017). Such conditions may compromise the caregivers' ability to establish empathic connections with youth, contributing to

decrease the quality of care for this at-risk group (Raskin et al., 2015). Burnout and STS were moderately correlated with general stress level, work overload and relationships at work. The remaining correlations were low. This is an expected finding, considering that occupational stress has a negative impact on worker's professional quality of life (Richter & Berger, 2009), as assessed by PROQOL. The DASS-21 assumes a more generalist approach, evaluating state symptoms that occurred on the previous week, while burnout is caused by chronic levels of occupational stress (Conrad & Kellar-Guenther, 2006; Craig & Sprang, 2010). According with these findings, both work overload and the existence of interpersonal conflicts at work can be seen as potential risk factors to the development or exacerbation of burnout and STS (Steinlin et al., 2017). These findings agree with previous research, which had highlighted the associations between burnout with both work overload and lack of support (Baugerud et al., 2018; Del Valle et al., 2007; Lizano & Mor Barak, 2012; Maslach et al. 2001; Seti, 2008), suggesting that burnout can be a social phenomenon, rather than an exclusively individual response (Lizano & Mor Barak, 2012; Maslach et al., 2001).

Still regarding the construct validity, as expected, negative associations between the Stress-RYCaregivers subscales and the Satisfaction with Life, and Compassion Satisfaction were obtained (Maslach et al. 2001; Steinlin et al., 2017), yet achieving low magnitude. The low magnitude associations between these variables might indicate that Satisfaction with Life and Compassion Satisfaction are influenced by other factors, beside occupational stress. Specifically, Compassion satisfaction was not correlated with both Caring for children and young people and training activities. This is an unexpected finding considering previous research (Baugerud et al., 2018; Conrad & Kellar-Guenther, 2006; Samios et al., 2013; Stamm, 2010), with difficult interpretation. Thus, future research should explore this relationship within RYC workers.

As in previous research (Boyas et al., 2012; Del Valle et al., 2007; Lizano & Mor Barak, 2012), personal variables and work-related variables proved to influence the levels of stress experienced by professional caregivers. In the current study, the eldest group of professional caregivers (more than 50 years old), reported lower levels of stress on work overload and on home-work interface, when compared with their colleagues aged between 35 to 50 years. Previous studies found similar findings (Del Valle et al., 2007). Yet, some studies found that younger workers reported higher levels of stress than their older colleagues (Boyas et al., 2012). However, in our sample, older caregivers only significantly differ from the middle age range group (35-50) on specific sources of stress. As workers get older, they probably acquire greater security and have already learned to cope with load work and responsibilities (Del Valle et al., 2007). Furthermore, stress related with home-work interface might be lower within this age group, since their own sons tend to be older and therefore more autonomous, making family requirements to be less demanding. On the contrary, professional caregivers aged between 35 and 50 years old, who might have younger children themselves, might experience some level of role constraint/conflict due to having the same caring role at both work and home (Baugerud et al., 2018; Lizano & Mor Barak, 2012). In addition, professionals who care for children and youth with the same age of their own child, may become overinvolved, due to identification and countertransference processes, which may serve as a source of occupational stress (Figley, 2002; Gibbons et al., 2011). Regarding educational level, caregivers with a university degree reported higher levels of stress related with work overload and in home-work interface, than caregivers who had completed high school. In previous research, professionals with higher educational degree also presented higher stress (Del Valle et al., 2007). This finding may reflect a

discrepancy between the expectations generated by a university background and the reality of RYC institutions, as well as the required work (Del Valle et al., 2007).

With regard to work-related variables, significant differences were found between the technical and the educational teams in work overload, with technical team members experiencing higher stress. In addition to the main function of taking care of children and youth, members of the technical team are also responsible for monitoring children's life project and their progress in different life contexts, accumulating bureaucratic tasks and having an intermediate role with other institutional partners (Krueger, 2007; Seti, 2008). Professional caregivers with less years of service reported less stress related with work overload and training activities, when compared with more experienced colleagues, as well as less stress on relationships at work and on home-work interface, than their colleagues with 5 to 15 years of service. These findings differ from previous research (Del Valle et al., 2007) and may be explained, at least partially, by the enthusiasm and hope felt by younger caregivers at the beginning of their careers in helping children and youth at risk.

Current findings may contribute to enhance our knowledge about the sources of occupational stress and may inform organization managers in the prevention of stress, as well as researchers in the development of interventions aimed at preventing and reducing stress on care professionals. Bearing these considerations in mind, some recommendations can be made for the RYC policies, practices and research.

Organizations should recognize the challenges of this setting and consider staff well-being as an area of concern, since psychological distress may contribute to adverse functioning of the RCH (Raskin et al., 2015). Both management and staff should be trained in identifying stress symptoms and developing coping strategies to address and regulate it (Baugerud et al., 2018; Molnar et al., 2017). Additionally, supervision and

teamwork based on mutual support can also be important organizational factors to consider, in order to buffer occupational stress and unfavourable related conditions (Baugerud et al., 2018; Craig & Sprang, 2010; Del Valle et al., 2007; Mor Barak et al., 2006; Sprang et al., 2011). In order to reduce workload and facilitate the quality-of-care provision, the number of caregivers per child should also be increased (Eapen, 2009).

This study is not free of limitations. Firstly, it relies on self-report measures, which, regardless of their good psychometric proprieties, may be associated with some bias. Secondly, since professional caregivers are predominantly female (Barth et al., 2008), our sample is also mostly composed of females. The huge difference in sex proportion, precludes testing the measurement invariance model by sex and further comparisons. Yet, others studies did not find significant differences on job related stress regarding sex on these professionals (Barbosa, 2020; Craig & Sprang, 2010; Del Valle et al., 2007). Finally, this measure was validated in Portuguese language and sample, and future research should test its factor structure and measurement invariance in other cultures.

The Stress Questionnaire for Residential Youth Care Professionals (Stress-RYCaregivers) is an appropriate measure to assess the potential sources of occupational stress experienced by professional caregivers working in RYC settings. The validation of Stress-RYCaregivers may contribute to further research on RYC staff stress and to improve the professional quality of life of caregivers and their care practices. If the aim of RYC placement is to protect and promote children and youth's healthy development, providing them a secure environment is not only mandatory, but, mostly, a way to reestablish their mental health (Bailey et al., 2019; Campos et al., 2019).

Disclosure statement

The authors report no conflict of interest.

Data availability statement

The datasets generated and analysed during the current study are available from the corresponding author on request. The corresponding author take responsibility for the integrity of the data and the accuracy of the data analysis.

References

- Adams, R. E., Boscarino, J. A., & Figley, C. R. (2006). Compassion fatigue and psychological distress among social workers: A validation study. *American Journal of Orthopsychiatry*, 76(1), 103–108. <https://doi.org/10.1037/0002-9432.76.1.103>
- Bailey, C., Klas, A., Cox, R., Bergmeier, H., Avery, J., & Skouteris, H. (2019). Systematic review of organisation-wide, trauma-informed care models in out-of-home care (OoHC) settings. *Health and Social Care in the Community*, 27(3), e10–e22. <https://doi.org/10.1111/hsc.12621>
- Barbosa, J.S.G. (2020). *Qualidade de vida profissional e a sua relação com a percepção do suporte social em profissionais de casas de acolhimento residencial*. [Professional quality of life and its relationship with the perception of social support in professionals of residential care homes.] (Master Dissertation). University of Coimbra, Portugal.
- Barford, S. W., & Whelton, W. J. (2010). Understanding burnout in child and youth care workers. *Child and Youth Care Forum*, 39(4), 271–287. <https://doi.org/10.1007/s10566-010-9104-8>
- Barth, R. P., Lloyd, E. C., Christ, S. L., Chapman, M. V., & Dickinson, N. S. (2008). Child welfare worker characteristics and job satisfaction: A national study. *Social Work*, 53(3), 199–209. <https://doi.org/10.1093/sw/53.3.199>
- Baugerud, G. A., Vangbæk, S., & Melinder, A. (2018). Secondary traumatic stress, burnout and compassion satisfaction among Norwegian child protection workers: Protective and risk factors. *British Journal of Social Work*, 48(1), 215–235.

<https://doi.org/10.1093/bjsw/bcx002>

Bloomquist, K. R., Wood, L., Friedmeyer-Trainor, K., & Kim, H.-W. (2016). Self-care and professional quality of life: Predictive factors among MSW practitioners. *Advances in Social Work, 16*(2), 292–311. <https://doi.org/10.18060/18760>

Boyas, J., Wind, L. H., & Kang, S. Y. (2012). Exploring the relationship between employment-based social capital, job stress, burnout, and intent to leave among child protection workers: An age-based path analysis model. *Children and Youth Services Review, 34*(1), 50–62. <https://doi.org/10.1016/j.childyouth.2011.08.033>

Bride, B. E., Radey, M., & Figley, C. R. (2007). Measuring compassion fatigue. *Clinical Social Work Journal, 35*(3), 155–163. <https://doi.org/10.1007/s10615-007-0091-7>

Campos, J., Barbosa-Ducharne, M., Rodrigues, S., Martins, A.C., & Leal, M. (2019). Emotional and behavioral problems and psychosocial skills in adolescents in residential care. *Child and Adolescent Social Work Journal, 36*, 237-246.

<https://doi.org/10.1007/s10560-018-0594-9>

Carvalho, P. (2011). *Estudo da fadiga por compaixão nos cuidados paliativos em Portugal: Tradução e adaptação cultural da Escala Professional Quality of Life-5*. [Study of compassionate fatigue in palliative care in Portugal: Translation and cultural adaptation of the Professional Quality of Life-5 Scale.] Unpublished Master Dissertation. Catholic University of Portugal, Porto.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2^a ed.).

Erlbaum.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385-396.

- Conrad, D., & Kellar-Guenther, Y. (2006). Compassion fatigue, burnout, and compassion satisfaction among Colorado child protection workers. *Child Abuse and Neglect*, 30(10), 1071–1080. <https://doi.org/10.1016/j.chiabu.2006.03.009>
- Craig, C. D., & Sprang, G. (2010). Compassion satisfaction, compassion fatigue, and burnout in a national sample of trauma treatment therapists. *Anxiety, Stress, and Coping*, 23(3), 319–339. <https://doi.org/10.1080/10615800903085818>
- Dancey, C.P. & Reidy, J. (2007). *Statistics without maths for psychology* (4th ed.). Pearson Education.
- Del Valle, J. F., López, M., & Bravo, A. (2007). Job stress and burnout in residential child care workers in Spain. *Psicothema*, 19(4), 610–615.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.
- Eapen, D. J. (2009). Institutionalized children: The underprivileged. *International Journal of Nursing Practice*, 15(5), 349-352.
- Esaki, N., Benamati, J., Yanosy, S., Middleton, J. S., Hopson, L. M., Hummer, V. L., & Bloom, S. L. (2013). The sanctuary model: Theoretical framework. *Families in Society: The Journal of Contemporary Social Services*, 94(2), 87–95. <https://doi.org/10.1606/1044-3894.4287>
- Faragher, E.B., Cooper, C.L., & Cartwright, S. (2004). A shortened stress evaluation Tool (ASSET). *Stress and Health*, 20, 189–201. <https://doi.org/10.1002/smi.1010>
- Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed.). Sage edge.
- Figley, C. R. (2002). Compassion fatigue: Psychotherapists' chronic lack of self-care. *Journal of Clinical Psychology*, 58(11), 1433–1441. <https://doi.org/10.1002/jclp.10090>
- Gibbons, S., Murphy, D., & Joseph, S. (2011). Countertransference and positive growth in social workers. *Journal of Social Work Practice*, 25(1), 17-30.

<https://doi.org/10.1080/02650530903579246>

Gomes, A. R. (2014). Stress ocupacional em profissionais de saúde: Um estudo comparativo entre médicos e enfermeiros [Occupational stress in health professionals: A comparative study between doctors and nurses]. *Revista Interamericana de Psicologia*, 48(1), 118-130.

Gomes, A.R., & Teixeira, P.M. (2016). Stress, cognitive appraisal and psychological health: testing instruments for health professionals. *Stress and Health*, 32(2), 167–172.

<https://doi.org/10.1002/smi.2583>

Hair, F., Black, C., Babin, J., & Anderson, E. (2009). *Multivariate data analysis* (7th ed.). Upper Saddle River.

Hermon, S. R., & Chahla, R. (2019). A longitudinal study of stress and satisfaction among child welfare workers. *Journal of Social Work*, 19(2), 192–215.

<https://doi.org/10.1177/1468017318757557>

Instituto da Social Social [ISS] (2021). Casa 2020 - Relatório de caracterização anual da situação de acolhimento das crianças e jovens [Annual report on the characterization of children and young people in residential care]. Instituto da Segurança Social, I.P.

<https://www.seg-social.pt/documents/10152/13200/CASA+2020.pdf/b7f02f58-2569-4165-a5ab-bed9efdb2653>

Kind, N., Eckert, A., Steinlin, C., Fegert, J. M., & Schmid, M. (2018). Verbal and physical client aggression – A longitudinal analysis of professional caregivers’ psychophysiological stress response and burnout. *Psychoneuroendocrinology*, 94, 11–16. <https://doi.org/10.1016/j.psyneuen.2018.05.001>

Korkmaz, S., Goksuluk, D., & Zararsiz, G. (2014). MVN: An R package for assessing multivariate normality. *The R Journal*, 6(2), 151. <https://doi.org/10.32614/rj-2014-031>

Krueger, M. (2007). Four areas of support for child and youth care workers. *Families in*

Society, 88(2), 233–240. <https://doi.org/10.1606/1044-3894.3621>

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198–1202.

Lizano, E.L., & Mor Barak, M.E. (2012). Workplace demands and resources as antecedents of job burnout among public child welfare workers: A longitudinal study. *Children and Youth Services Review*, 34(9), 1769–76.

<https://doi.org/10.1016/j.chilyouth.2012.02.006>

Lovibond, P.F. & Lovibond, S.H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck depression and anxiety inventories. *Behaviour Research and Therapy*, 33, 335–343.

[http://dx.doi.org/10.1016/0005-7967\(94\)00075-U](http://dx.doi.org/10.1016/0005-7967(94)00075-U).

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422.

Middleton, J.S. & Potter, C.C. (2015). Relationship between vicarious traumatization and turnover among child welfare professionals. *Journal of Public Child Welfare*, 9, 195–216. <https://doi.org/10.1080/15548732.2015.1021987>

Molnar, B. E., Sprang, G., Killian, K. D., Gottfried, R., Emery, V., & Bride, B. E. (2017). Advancing science and practice for vicarious traumatization/secondary traumatic stress: A research agenda. *Traumatology*, 23(2), 129–142.

<https://doi.org/10.1037/trm0000122>.

Mor Barak, M. E., Levin, A., Nissly, J. A., & Lane, C. J. (2006). Why do they leave? Modeling child welfare workers' turnover intentions. *Children and Youth Services Review*, 28, 548–577. <https://doi.org/10.1016/j.chilyouth.2005.06.003>

Obermann, A. O. (2017). Exploring occupational stress through the perspectives of the child welfare workforce. *ProQuest Dissertations and Theses*, 447.

- Pais-Ribeiro, J.L., Honrado, A., & Leal, I. (2004). Contribuição para o estudo da adaptação portuguesa das escalas de ansiedade, depressão, stress de Lovibond e Lovibond [Contribution for the Portuguese validation of depression, anxiety and stress scales of Lovibond and Lovibond]. *Psychologica*, 36, 235–246.
- Peng, C. J., Harwell, M., Liou, S., & Ehman, L. H. (2006). Advances in missing data methods and implications for educational research. In S. S. Sawilowsky (Ed.), *Real Data Analysis* (pp. 31-78). Information Age Publishing.
- Raskin, M., Kotake, C., Easterbrooks, M. A., Ebert, M., & Miller, L. C. (2015). Job-related stress and depression in orphanage and preschool caregivers in Ukraine. *Journal of Research in Childhood Education*, 29(1), 130–145.
<https://doi.org/10.1080/02568543.2014.978516>
- Richter, D., & Berger, K. (2009). Psychological consequences of patient assaults on mental health staff. Prospective and retrospective data. *Nervenarzt*, 80, 68–73.
- Samios, C., Abel, L., & Rodzik, A. (2013). The protective role of compassion satisfaction for therapists who work with sexual violence survivors: An application of the broaden-and- build theory of positive emotions. *Anxiety, stress, and coping*, 26(6), 610-623. <https://doi.org/10.1080/10615806.2013.784278>
- Seti, C. L. (2008). Causes and treatment of burnout in residential child care workers: A review of the research. *Residential Treatment for Children & Youth*, 24(3), 197–229.
<https://doi.org/10.1080/08865710802111972>
- Simões, A. (1992). Ulterior validação de uma escala de satisfação com a vida (SWLS). [Further validation of a life satisfaction scale]. *Revista Portuguesa de Pedagogia*, 26, 503-515.

- Smith, Y., Colletta, L., & Bender, A. E. (2019). Moral people or moral projects? Worker altruism in youth residential treatment. *Culture, Medicine and Psychiatry*, 43(1), 25–55. <https://doi.org/10.1007/s11013-018-9594-7>
- Sprang, G., Craig, C., & Clark, J. (2011). Secondary traumatic stress and burnout in child welfare workers: A comparative analysis of occupational distress across professional groups. *Child Welfare*, 90(6), 149–168.
- Stamm, B. H. (2010). *The Concise ProQOL Manual*. Pocatello, ID: ProQOL.org
- Steinlin, C., Dölitzsch, C., Kind, N., Fischer, S., Schmeck, K., Fegert, J. M., & Schmid, M. (2017). The influence of sense of coherence, self-care and work satisfaction on secondary traumatic stress and burnout among child and youth residential care workers in Switzerland. *Child and Youth Services*, 38(2), 159–175. <https://doi.org/10.1080/0145935X.2017.1297225>
- Teicher, M.H. & Samson, J.A. (2016). Annual research review: Enduring neurobiological effects of childhood abuse and neglect. *Journal of Child Psychology and Psychiatry*, 57 (3), 241–266. <https://doi.org/10.1111/jcpp.12507>

Table 1. Psychometric properties of the Stress-RYCaregivers

Items	<i>M</i>	<i>SD</i>	<i>r</i>	λ	α^*
Part 1.					
In general, my professional activity causes me...	2.29	.768			
Part 2.					
F1 Caring of Children and Young People ($\alpha = .82$)	2.40	.82			
1. Make decisions where mistakes can have serious consequences for children and young people	2.65	1.02	.599	.718	.783
8. Not being able to respond to what children and young people expect from me	2.14	1.04	.683	.823	.743
14. Manage serious problems of children and young people	2.42	.99	.674	.782	.749
20. Feel that there is nothing I can do to solve the problems of children and young people	2.40	1.04	.583	.723	.791
F2 Work overload ($\alpha = .81$)	2.01	.88			
4. Having to work long hours straight	2.10	1.13	.550	.753	.795
12. Overwork related to bureaucratic tasks	1.60	1.13	.606	.719	.769
16. Lack of time to perform properly my professional tasks	2.08	1.08	.594	.774	.774
22. Overload or overwork	2.25	1.11	.757	.860	.694
F3 Career progression and salary ($\alpha = .87$)	2.00	.91			
3. Absence of opportunities for career development	1.94	1.10	.692	.863	.847
10. No opportunities to progress in my career	1.86	1.21	.704	.911	.845
13. Receive a low salary	2.23	1.05	.742	.899	.836
17. Live with the financial resources I have	1.74	1.11	.585	.718	.872
23. Have an inadequate/insufficient salary	2.23	1.14	.783	.929	.824
F4 Relationships at work ($\alpha = .86$)	1.92	.92			
2. Covert favoritism and/or discrimination in my workplace	2.11	1.18	.633	.758	.835
7. Lack of encouragement and support from superiors	1.76	1.19	.629	.838	.836
9. The social climate and interpersonal relations in my workplace	1.86	1.13	.672	.729	.824
15. Interpersonal conflicts with my colleagues	1.76	1.11	.700	.807	.817
21. Inadequate or inappropriate behaviors of my colleagues at work	2.10	1.16	.712	.795	.814
F5 Training activities ($\alpha = .79$)	1.64	1.02			
6. Speak in public or do public presentations	2.00	1.28	.546	.658	.817
18. Prepare trainings activities to do at my workplace	1.32	1.14	.669	.868	.685
24. Carry out training activities under my responsibility	1.60	1.22	.699	.851	.647
F6 Home-work interface ($\alpha = .81$)	1.43	.93			
5. Have interpersonal problems with significant others/relatives due to my professional responsibilities	1.59	1.20	.663	.858	.734
11. Lack of stability and security in my marriage and/or personal life due to my professional responsibilities	1.23	1.18	.704	.793	.714
19. Lack of social and emotional support outside of my work (e.g., family, friends)	1.01	1.05	.481	.630	.816
25. Lack of time to maintain a good relationship with significant others (partner, children, friends)	1.90	1.26	.643	.782	.746

Note. *M* = mean; *SD* = standard deviation; *r* = corrected item-total correlation; λ = items loadings; α = Cronbach Alpha; α^* = Cronbach Alpha if item deleted. $p < .001$.

Table 2. Retest reliability of the Stress-RYCaregivers

	<i>r</i>
Caring of Children and Young People	.673**
Work overload	.678**
Career progression and salary	.799**
Relationships at work	.825**
Training Activities	.558**
Home-work interface	.706**

Note. *r* = correlation between factor scores at different evaluation times.
 ** $p < .001$.

Table 3. Intercorrelations between Stress-RYCaregivers subscales

	CCYP	WO	CPS	RW	TA	HWI
GST	.495**	.522**	.256**	.502**	.263**	.376**
WO	.547**	-	-	-	-	-
CPS	.333**	.500**	-	-	-	-
RW	.617**	.617**	.504**	-	-	-
TA	.445**	.426**	.342**	.385**	-	-
HWI	.504**	.655**	.558**	.533**	.455**	-

Note. GST = General Stress level (part 1); CCYP = Caring for children and young people; WO = Work overload; CPS = Career progression and salary; RW = Relationships at work; TA = Training activities; HWI = Home-work interface.

Table 4. Correlations between Stress-RYCaregivers subscales and external variables

	SWLS	CS	BO	STS	DEP	ANX	Stress
GST	-.044	-.236**	.415**	.469**	.302**	.330**	.325**
CCYP	-.140*	-.068	.268**	.352**	.180**	.206**	.241**
WO	-.121*	-.176**	.453**	.405**	.173**	.234**	.283**
CPS	-.286**	-.183**	.333**	.284**	.245**	.227**	.266**
RW	-.164**	-.244**	.475**	.471**	.303**	.300**	.312**
TA	-.138*	-.084	.239**	.340**	.146**	.169**	.171**
HWI	-.277**	-.195**	.353**	.382**	.274**	.283**	.260**

Note. GST = General Stress level (part 1); CCYP = Caring for children and young people; WO = Work overload; CPS = Career progression and salary; RW = Relationships at work; TA = Training activities; HWI = Home-work interface; SWLS = Satisfaction with life; CS = Compassion Satisfaction; BO = Burnout; STS = Secondary Traumatic Stress; DEP = Depression; ANX = Anxiety. ** $p < 0.01$; * $p < 0.05$

Table 5. Mann-Whitney Test between Stress-RYCaregivers' subscales and team work

	Team Work				U	<i>p</i>	<i>r</i>
	Technical team (N = 121)		Educative team (N = 203)				
	M (SD)	Mean rank	M (SD)	Mean rank			
CCYP	2.56 (.79)	173.63	3.37 (.79)	153.36	10571.5	.057	-.095
WO	2.23 (.84)	178.55	1.93 (.89)	145.11	9573.5	.004	-.121
CPS	2.04 (.93)	160.40	2.03 (.90)	158.96	11733.5	.892	-.023
RW	2.00 (.93)	162.13	1.97 (.89)	153.89	10899.5	.434	-.070
TA	1.64 (.97)	159.68	1.67 (1.05)	161.00	11940.0	.901	-.028
HWI	1.53 (.96)	167.98	1.42 (.94)	157.60	11376.0	.331	-.045

Note. CCYP = Caring for children and young people; WO = Work overload; CPS = Career progression and salary; RW = Relationships at work; TA = Training activities; HWI = Home-work interface.

Table 6. Kruskal-Wallis Test between Stress-RYCaregivers' subscales and personal and work-related variables

	Age							Education level						Years of Service										
	Up to age 34 (N = 106)		35 to 50 (N = 160)		Over 50 (N = 91)		H (df)	P	Elementary/ middle school (N = 76)		High school (N = 93)		University Degree (N = 188)		H (df)	P	Up to 4 years (N = 118)		5 to 15 years (N = 157)		More than 15 years (N = 82)		H (df)	P
M (SD)	Mean rank	M (SD)	Mean rank	M (SD)	Mean rank	M (SD)			Mean rank	M (SD)	Mean rank	M (SD)	Mean rank	M (SD)			Mean rank	M (SD)	Mean rank	M (SD)	Mean rank	M (SD)		
1	2.46 (.78)	182.03	2.45 (.78)	182.39	2.24 (.92)	161.67	2.756 (2)	.252	2.26 (.80)	159.74	2.26 (.90)	165.27	2.53 (.77)	189.60	6.245 (2)	.044	2.32 (.89)	167.65	2.52 (.70)	191.30	2.27 (.91)	162.79	5.652 (2)	.059
2	1.92 (.84)	165.43	2.15 (.86)	191.80	1.86 (.96)	158.88	7.565 (2)	.023	1.95 (.91)	165.91	1.74 (.92)	147.08	2.17 (.83)	193.32	13.685 (2)	.001	1.70 (.87)	138.89	2.25 (.76)	202.09	1.99 (.99)	175.82	25.903 (2)	.001
3	2.05 (.90)	178.73	2.02 (.94)	178.17	1.89 (.89)	162.99	1.550 (2)	.461	2.02 (.89)	175.48	1.81 (.87)	153.42	2.09 (.94)	184.61	5.938 (2)	.051	1.92 (.99)	164.08	2.02 (.81)	175.31	2.10 (1.00)	188.90	2.836 (2)	.242
4	1.84 (.95)	164.08	2.04 (.92)	185.65	1.79 (.85)	161.03	4.589 (2)	.101	1.97 (.77)	178.08	1.74 (1.03)	157.29	1.99 (.90)	178.84	3.086 (2)	.214	1.70 (1.00)	149.17	2.08 (.80)	189.48	1.91 (.95)	175.66	10.876 (2)	.004
5	1.49 (.96)	161.26	1.69 (1.01)	179.24	1.75 (1.11)	184.09	2.980 (2)	.225	1.85 (1.04)	195.58	1.51 (1.02)	161.40	1.63 (1.00)	173.80	4.678 (2)	.096	1.39 (1.01)	149.25	1.78 (.99)	188.89	1.76 (1.03)	188.78	12.099 (2)	.002
6	1.48 (.96)	180.90	1.53 (.91)	187.23	1.22 (.93)	152.72	6.896 (2)	.032	1.31 (.91)	165.36	1.26 (.92)	157.09	1.57 (.94)	190.27	7.703 (2)	.021	1.32 (1.02)	160.88	1.38 (1.02)	191.42	1.43 (.94)	170.29	6.467 (2)	.039

Note. 1 CCYP = Caring for children and young people; 2 WO = Work overload; 3 CPS = Career progression and salary; 4 RW = Relationships at work; 5 TA = Training activities; 6 HWI = Home-work interface.