Sense of coherence and burnout among school psychologists: The moderating role of loneliness

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Abstract
School psychologist have been considered at a high risk for developing work burnout due to their multiple responsibilities, overload and engagement in caring for children, families and professionals. In line with the salutogenic approach, the aim of the current research was to investigate protective and risk factors to burnout. Research has indicated that sense of coherence (SOC) may act as a protective factor. Studies reported that loneliness has been found a risk factor that may advance burnout. The current study hypothesized that loneliness may moderate the link between SOC and burnout. In a sample of 104 Israeli school psychologists, demographic aspects such as the gender, years of experience, or type of school in which they work did not predict the burnout, focusing on the importance of emotional aspects. The analysis demonstrated that the SOC was negatively associated with burnout among low or mean levels of loneliness, but not among psychologists with high levels of loneliness. The current study provides a new insight into the burnout risk, through the focus on personal resources and social perceptions. Implications for theoretical and practices are further discussed.

Keywords Burnout · Sense of coherence · Loneliness · School psychologists · Coping

Introduction
The wide range of roles and expectations that have defined the school psychology practices may become a source of stress and burnout (Huebner 1992; Ross et al. 2002). School psychologists are trained to deliver mental and behavioral health services for children and adolescents, to intervene at the individual and system level, and develop, implement, and evaluate preventive programs. It is considered to be a highly demanding occupation since school psychologists cope with wide-ranging occupation responsibilities and thus are at higher risk to develop work related stress and burnout (Bell and McKenzie 2013). For example, in a recent study, school psychologists in four South-eastern states in USA reported that they experienced burnout, and attributed its causes to their feelings of role overload and to the lack of adequate support from administration (Schilling et al. 2018). The goals of the current study are to examine personal resources that predict the burnout experience among school psychologists in Israel. In line with the Salutogenic approach that focus attention on sources of health and empowerment (Antonovsky 1987), the current study explored factors that may reduce the burnout.

Burnout
Maslach (2001, p. 189) defined burnout as “a psychological syndrome that involves prolonged response to stressors in the workplace”. Job burnout includes feeling exhausted physically, emotionally, and/or mentally, in the context of work. The construct consists of three major components (Maslach and Jackson 1981):

1. Emotional exhaustion - feelings of energy depletion and exhaustion.
2. Inefficiency and Distancing: increased mental distance from one’s job, reduced professional efficacy, an impaired feeling of self-fulfillment as well as lower self-evaluation of effectiveness in the work role.

3. Cynicism and depersonalization – negative attitudes even hostility towards work, clients and colleagues.

While burnout does not appear in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association 2013), it has been included in the 11th Revision of the International Classification of Diseases (ICD-11, QD85) as an occupational phenomenon “resulting from chronic workplace stress that has not been successfully managed” (World Health Organization 2018).

In line with the Conservation of Resources theory (COR) (Hobfoll 1989; Hobfoll et al. 2018) which expands the literature on coping with stress, burnout was considered as a long-term, negative affective state comprising emotional exhaustion, physical fatigue, and cognitive weariness, and resulting from chronic exposure to unresolvable occupational stress (Shirom and Melamed 2006). The COR theory has proposed that people strive to obtain, maintain and create resources that they value, and the loss of these resources and values will lead to stress. Within this model, burnout has been conceptualized as physical exhaustion from an excessive workload that is likely to make individuals feel overwhelmed and unable to meet their work-related goals. The heavy workload decreases time to consider how to mobilize resources. The complexity of problems can be beyond their resources.

Burnout affects the quality of life, reduces motivation and productivity and has often reflected in a lack of vitality (Maslach 2018). The individuals gradually may reduce their interest in their work, and they often complain about levels of enthusiasm. Helplessness and despair may dominate their work-related affect, and they may react in a cynical way towards others. In some cases, burnout may also lead to a decision to leave workplace or even to change occupation (Gabel Shemuelli et al. 2016).

Research attributed the causes of the burnout experience to the work related conditions, as well as personal characteristics (Maslach 2001). Work related factors include specific work aspects such as overload, time pressure and many emotional demands. Organizational factors are comprised of rigid hierarchies, demanding values and the management model in the organization. Personal demographic factors may include socio-demographic variables such as gender, age, and education. Personality characteristics such as perfectionism, pessimism and high excitability also increase the risk of developing burnout symptoms (Keinan and Melamed 1987). In line with the COR approach, personal resources such as coping skills and interpersonal resources such as social support are significant characteristic resources, that may buffer the risk of the burnout. The occurrence of burnout syndrome has been described in diverse occupations, and it was often related to activities of caring, advising, healing or protecting (Weber and Jaekel-Reinhard 2000) and connected not only with overload demands at work, difficult critical decision making, but also with compassion fatigue, which is extreme distress resulting from helping others that suffer (Ledoux 2015).

### Burnout among School Psychologists

School psychologists are trained in a variety of treatment and diagnostic methods in order to provide services to a range of educational settings. Accordingly, school psychology is considered a demanding occupation in which the professionals deal with job-related pressures, such as emotional demands for empathy, prolonged exposure to suffering and difficulties, reduced control in decision-making in schools and many ongoing pressures stemming from different sources including children, parents and educational staff (Huebner and Mills 1994; Schilling et al. 2018). Therefore, it is important to identify factors that may reduce or enhance burnout among school psychologists.

Originally, burnout was investigated among helping professionals such as nurses, psychologists and physicians and among educational staff, mostly teachers (for review see National Academy of Medicine 2019; Kaeding et al. 2017). School psychologists are trained in a variety of treatment and diagnostic methods in order to provide services to a range of educational settings. This high demanding caring profession may predispose them to burnout. An early longitudinal study of the burnout of school psychologist reported the stability of the distress and focused attention on the role of environmental and personality variables (e.g., extraversion, agreeableness) in predicting burnout (Mills and Huebner 1998). Sandoval (1993) further confirmed the role of personality factors in predicting the burnout of school psychologists, but he identified a different set of personality characteristics. He proposed that individuals who are well-adjusted, free of neurotic trends, mature, optimistic and having a wide range of interest are less prone to burnout. Focusing on the differences between studies, Sandoval (1993) proposed that “individuals who are not well adjusted are more prone to burnout (Sandoval 1993, p. 325) and proposed that the Big Five personality variables accounted for the burnout. Recent studies have indicated that estimates of burnout across mental health services are higher than in other professions and school psychologists in particular are at a higher risk for experiencing burnout (Rodriguez and Carlotto 2017).

The goal of the current study was to examine the predictors of burnout from the Salutogenic approach that explores the sources of health and wellbeing and has emphasized the empowerment of personal resources, and positive self-perceptions (Antonovsky 1987). The main concept in this
paradigm is the Sense of Coherence (SOC) that may serve as a crucial coping resource in understanding the risk of burnout (Mittelmark et al. 2017).

**Sense of Coherence (SOC) and Burnout**

Sense of coherence refers to the global and stable orientation to view the world and the individual environment as comprehensible, manageable, and meaningful. More specifically, when facing a stressor, high SOC reflects a self-confidence that (a) the stressor is structured, predictable and explicable; (b) that the resources of the individuals are available and effective in order to manage the stressor’s demands; and (c) the stressor is viewed as meaningful and worthy of investment. The SOC enables individuals to make use of adaptive coping strategies and, thus, may buffer against the negative effects of stress (Antonovsky 1987).

Within the context of job-related stressors, SOC is considered to be a crucial resource that may enhance professionals’ adaptive reactions to the outcomes of challenging experiences (Kalimo et al. 2003). Previous studies established a link between SOC and job burnout, particularly among therapeutic occupations (e.g., Bracha and Bocos 2015; Galletta et al. 2019b; Levert et al. 2000; Steinalin et al. 2017). It seems that social support and high levels of SOC may protect professionals from the risks of burnout and their negative outcomes such as physical and emotional problems (Del-Pino-Casado et al. 2018). In order to better understand the circumstances under which SOC may act as a protective factor against burnout, we examined the moderating role of loneliness, which is considered to be an interpersonal risk factor to burnout (Seppala and King 2017).

**Loneliness and Burnout**

Loneliness can be defined as an unpleasant and pervasive emotional state arising from a discrepancy between desired and perceived interpersonal relationships (Peplau and Perlman 1982). Loneliness reflects a feeling of dissatisfaction with available social and emotional connections to others (Margalit 2012). Yet, sometimes it is not a result of social isolation, but it is related to the emotional exhaustion due to workplace burnout (Seppala 2017).

Loneliness has been linked to myriad negative outcomes, including poor social adjustment and health challenges (for review, see Heinrich and Gullone 2006). This distress indicates a reduced trust in the availability of interpersonal support, and previous research has found that lonely individuals in different professions may be at a greater risk for developing burnout. However, research has not clarified the nature of these relationships. For example, medical residents who experience loneliness also reported higher levels of burnout (Shapiro et al. 2015). College students who reported higher levels of loneliness also revealed many symptoms of learning burnout (Lin and Huang 2012). Similarly, loneliness at work also was related to increased risk of burnout among small-to-medium enterprise (SMEs) owner-managers (Fernet et al. 2016).

It is not clear if the loneliness may increase vulnerability to the detrimental effects of various personality characteristics of environmental negative factors and thus related to burnout only indirectly, or maybe it is directly related to a burnout distress (Shapiro et al. 2015). For example, loneliness has exacerbated the negative impact of perfectionism on depression and anxiety symptoms among college students (Chang et al. 2008) and moderated the link between poor problem-solving skills and suicidal behaviors (Hirsch et al. 2012). Additionally, protective personality factors such as sense of coherence may have a reduced beneficial impact in the context of loneliness. For example, self-esteem lost its positive impact in term of life satisfaction in the presence of high loneliness (Huo and Kong 2014). Moreover, coping strategies were ineffective when coinciding with high levels of loneliness (Marroquín et al. 2016). Thus, in our study, the loneliness may moderate the link between SOC and burnout.

**The Current Study**

The demanding role of the school psychologists has predicted their vulnerability. Early studies on the role of the working conditions, and demographic aspects in predicting burnout reported inconsistent results. In line with the Salutogenic approach, the current study has focused attention on the personal resources of the school psychologists, examining the predictive relationships between the burnout distress, the protective impact of SOC and the risk factor of loneliness levels.

In the present study, first, as preliminary analyses, we sought to extend prior studies on burnout by exploring the role of demographic aspects such as gender, school type and length of experience as a school psychologist on the experience of burnout. Since working as a school psychologist was found in early studies as a possible source of risk for developing burnout symptoms, we hypothesize that the SOC may serve as protective factor – and psychologists who experience high levels of SOC may report lower levels of burnout. However, since loneliness experience has been considered in earlier studies as a barrier to the impact of protective factors, we hypothesized that the different levels of loneliness may moderate the beneficial impact of SOC on the burnout experience.
Method

Participants

Participants consisted of 104 school psychologists (78 females and 26 males) who have been working in educational psychology centers that exist in every municipality throughout Israel. They are named ‘educational psychologists’, and provide public services to the educational systems. They perform psychological diagnosis, consultation, prevention and intervention activities, targeting students with typical development, as well as students with special needs, their schools and families. They provide psychological support during peace times and emergency periods. The psychologist has been assigned to educational systems such as preschools, elementary and high schools.

The age range of the sample was 26–59 (M = 37.4, SD = 7.61) and range of experience in working as school psychologists was wide from a single year to 30 years (M = 6.5 years, SD = 6.8). Psychologists that worked less than a single year were not included in the study. Participants were divided to two groups of experience: The first group: 52 psychologists whose working experience ranged from 1 to 4 years (M = 1.88; SD = 1.10). The second group: 52 psychologists whose experience ranged from 5 to 30 years (M = 11.29, SD = 6.95).

80 psychologists (76.9%) worked in elementary schools, 24 psychologists (23.1%) worked in middle schools and high schools. From the group of psychologists, 68 (57.6%) stated that they were actively involved with the inclusion of students with special education needs. The rest of the psychologists were involved in inclusion to a lesser extent.

Instruments

Burnout Burnout was assessed with the 16-item version of the Maslach burnout scale (Maslach et al. 1996), using the Hebrew version (Kellerman 2004) with items such as “I feel emotionally drained from my work”. The scale provides a burnout score comprised between 1 (“Never or almost never.”) and 7 (“Always or almost always.”). The Cronbach Alpha in the current study was .84.

Loneliness The Hebrew adaptation (Iecovich 2013) of the loneliness scale (De Jong Gierveld and Van Tilburg 2006) consisted of 11 statements describing loneliness (e.g. “I miss having a really close friend.”). The measure uses a 5-point Likert scale from 1 (not at all) to 5 (exactly like it). A Cronbach alpha of .71 was obtained in previous studies, and in current study it was .83.

Sense of Coherence To assess SOC (Antonovsky 1987; Mittelmark et al. 2017) we used the short version of the self-report scale that taps the following three components: comprehensibility and feelings that they understand the environmental demands; manageability and feelings of control over different occurrences; and meaningfulness and active involvement in a variety of important events. The scale consists of 13 items rated on 7-point Likert-type scales. For example, the statement, “Has it happened that people whom you counted on disappointed you.” is rated on descriptors such as 1 (“never happened”) to 7 (“always happened”). The reliability and construct validity of the scale were demonstrated through previous research (e.g., Al-Yagon and Margalit 2009), and a Cronbach alpha of .81 was reported. The Cronbach Alpha in the current study was .76.

Procedure

Following the approval from the college ethical committee, the questionnaires were presented on the ‘Israeli Educational Psychologists’ Facebook page. The psychologists provided online an informed consent before answering the questionnaires. Using SPSS 25, the preliminary analysis consisted of a MANOVA to examine the relations of burnout to gender and length of experience as psychologists, and Pearson correlations in order to examine associations among the demographic and research measures. In line with the hypothesis that loneliness may moderate the relations between SOC and burnout, a moderation model was examined, using Preacher and Hayes’s (2008) bootstrapping method with 5000 resamples with replacement. Bootstrapping was used since it provides a more reliable estimate of indirect effects and does not assume normality (Preacher and Hayes 2008).

Results

Preliminary Analyses

First, in order to examine gender and length of experience impact, a two-way MANOVA (gender X experience groups as independent variables) was performed with the SOC, loneliness and burnout as dependent variables. The analysis did not yield a main effect for the gender, experience groups or interactions. In order to examine the impact of the school type an additional MANOVA was performed with the school type (elementary school/high school), with the SOC, loneliness and burnout as dependent variables. The analysis did not yield a main effect for the school type. Means, SDs and Pearson correlations among the research measures are presented on Table 1. The burnout was significantly and negatively correlated only with the SOC. The correlations of the burnout with age and years of experience as a psychologist and loneliness were not significant. However, the SOC was positively correlated with years of experience as a psychologist, and negatively correlated with loneliness and burnout. A moderation analysis was performed to further examine the interactions between the predictors.
Table 1  Means, SDs and Pearson correlations among the research variables

|                      | M   | SD  | 1   | 2  | 3   | 4   | 5   |
|----------------------|-----|-----|-----|----|-----|-----|-----|
| 1. Years of experience | 6.59| 6.84|     |    |     |     |     |
| 2. Age               | 37.49| 7.61| .86**|   | .03 |     |     |
| 3. Sense of Coherence | 4.86| 0.62| .21*| .07| -.26**|     |     |
| 4. Loneliness        | 1.87| 0.56| .04 | .07| -.26**|     |     |
| 5. Burnout           | 2.93| 0.69| -.15| -.14| -.47**| .09 |     |

*p <.05, **p <.01

Moderation Analyses

To explore whether the experience of loneliness moderated the relationship between the SOC and the burnout experience, a moderation model was examined with a moderator of the effect of X (SOC) on Y (burnout) by M (loneliness), using PROCESS 3.4 (Command model 1) (Hayes 2018).

The model indicated that loneliness moderated the effect of SOC on burnout, $b = .52$, $SE = .19$, $t = 2.64$, $p < .01$, 95% CI [0.13, 0.90]. A simple slopes analysis revealed that when loneliness was low (16th percentile), a significant negative association was found between SOC and burnout, $b = - .78$, $SE = .14$, $t = - 5.77$, $p = .00$, 95% CI [-1.05, -0.51]. Similarly, at the mean levels of loneliness, a significant negative association between SOC and burnout was found, $b = - .55$, $SE = .10$, $t = - 5.53$, $p = .00$, 95% CI [-0.75, -0.35]. However, when loneliness was high (84th percentile), the relationship between SOC and burnout was nonsignificant, $b = - .17$, $SE = .17$, $t = - 0.97$, $p = .34$, 95% CI [-0.51, 0.18].

Figure 1 depicts these interaction effects. Only when the loneliness is low or mean, the relationship between SOC and burnout is significant and negative. This moderation means that the burnout is lower for the psychologists with a high SOC only when they did not experience high levels of loneliness. Yet, for the more lonely psychologists, the protective effect of the SOC on burnout was nonsignificant.

Discussion

The aim of this study was to investigate factors that predict school psychologists’ burnout. The results did not confirm that the relations between demographic aspects such as the gender, years of experience, or type of school in which they work and burnout, emphasizing the importance of the personality and emotional aspects. These findings are in line with the COR model which highlights the significant role of personal resources when facing burnout more than factors related to the personal and workplace circumstances (Hobfoll and Freddy 2017). Thus, in the current study it was found that the interplay between personal resources (SOC) and social distress (loneliness) were predictive of burnout.

As hypothesized, high levels of the sense of coherence experienced by the school psychologists predicted lower levels of burnout. The SOC is considered a protective factor that predicts positive health and adjustment outcomes. A strong SOC may enable school psychologists to respond adaptively to varied stressful situations presented by their work demands. In line with this approach, professionals with a strong SOC are better capable to mobilize resources, appraise stressful situations as challenging and use effective problem-solving approaches in order to manage stress and to experience lower levels of the burnout (Kalimo et al. 2003). This protective role of SOC on burnout was also demonstrated in previous studies among professionals such as teachers (Bracha and Bocos 2015), language therapists (Galletta et al. 2019a, 2019b) and welfare workers (Steinlin et al. 2017).

The perception of close and supportive social relationships is also considered as an important interpersonal resource for buffering the impact of stress, and to reduce the risk of burnout. Research emphasized the importance of the subjective perceptions of social support (Eagle et al. 2019). Thus, we hypothesized that the levels of loneliness as reflections of dissatisfaction from the social relations will moderate the protective effects of SOC on the burnout levels of school psychologists. The results confirmed the expectations. When loneliness levels were average or low, SOC was a protective factor, but not when the social distress levels were high. In an earlier study the loneliness was directly related to the burnout during residency of the medical profession (Shapiro et al. 2015). In the current study it was not directly related to burnout, but it reduced the beneficial impact of SOC as a protective factor. This finding support previous research indicating that loneliness did not affect directly the burnout, but has diminished the beneficial effects of psychological resources (Huo and Kong 2014; Marroquin et al. 2016). In addition, the current results emphasized the detrimental impact only of high levels of loneliness. This differentiation between different levels of loneliness is in line with the Salutogenic construct that has rejected a dichotomy conceptualization of the construct (lonely or not lonely). Considering loneliness as part of our typical life, everybody may experience lower levels of social distress as typical life experiences. However, only high levels of loneliness have to be treated as a risk factor.

The study has a unique theoretical and clinical importance. It has focused attention on the paradoxical role of the school psychologists, whose work targets the emotional and social challenges of teachers, parents and children, while this type of caring work exposed them to increased stress and feeling that many times they are standing alone while facing numerous stresses related to prevention and solving personal and systemic challenges and reducing the psychological distress in the educational systems. Although in earlier studies (Mills
and Huebner 1998; Sandoval 1993), personality characteristics were related to burnout, the unique contribution of this study is its focus on the importance of the SOC, and the different levels of loneliness as a moderator of the beneficial impact of SOC.

We prepare school psychologists to meet the needs of the students, families and teachers, but their needs may be neglected. The results of the study call for meeting their own needs for on-going support to reduce the risk of loneliness, while empowering their SOC (i.e., their understanding and manageability of situational demands, and their meaningful active involvement in a variety of important events). The practical therapeutic implications of the study call for developing programs to empower the SOC of professionals and enhancing partnerships within a supportive network of educational psychologists’ centers. Awareness to the threat of burnout and compassion fatigue (Kaeding et al. 2017) calls for preventive planning. In order to reduce the risk of burnout and enhance professionals wellbeing, and in line with the recommendations of the Consensus Study Report (National Academy of Medicine 2019) intervention planning have to integrate programs that will target individuals as well as the environmental conditions. This report showed that currently, interventions that significantly address clinician burnout are limited and requested extended studies and programs. The current study has suggested awareness to program that may enhance personal sense of coherence (e.g., Kahonen et al. 2012). Within the systemic consideration, it may also be beneficial to focus on social support from colleagues and management from the early stages of the psychological career in order to reduce feelings of high loneliness.

In conclusion, previous studies indicated that school psychologists are at a high risk to develop burnout due to their multiple job’s responsibilities, overload and their engagement in caring for others. The current findings showed that a strong SOC was a protective factor and related to lower levels of burnout. Yet, this protective association with SOC was found only among psychologist that did not experience high levels of loneliness. When school psychologist experienced high levels of social alienation, the SOC was not negatively associated with burnout.

The current study has several limitations. This work is a cross-sectional study and, thus, causal conclusions regarding the relationship between the predictive variables and burnout are not possible. Future studies may use longitudinal design in order to establish causal relationships between SOC, loneliness, environmental conditions and burnout. Moreover, a longitudinal design may allow the early identification of burnout.
symptoms among psychologist, and to characterize those who are more prone to burnout in order to intervene before burnout becomes chronic. In addition, participants were not randomly selected for the study, which may cause a selection bias and affect the generalization of the findings. Finally, the current study used self-report questionnaire. Future studies have to consider a mixed design studies in order to tap personal expressions of the distress and include in depth interviews in addition to the questionnaires.

Finally, notwithstanding these limitations, the current study provides a new insight to the burnout risk through the focus on coping resources and loneliness perceptions. The burnout experienced by the school psychologists has affected not only their wellbeing, but may also reduce their abilities to provide valuable help to children, families and schools. There is a need to foster the wellbeing of these professionals by empowering their coping resources, within a supportive environment.

Compliance with Ethical Standards

Conflicts of Interest  The authors declare that there are no conflicts of interest with respect to the authorship or the publication of this article.

References

Al-Yagon, M., & Margalit, M. (2009). Positive and negative affect among mothers of children with intellectual abilities. British Journal of Developmental Disabilities, 55(109), 109–127. https://doi.org/10.1179/09679597099103070.

American Psychiatric Association. (2013). DSM-5: Diagnostic and statistical manual of mental disorders (5th ed.). Arlington: American Psychiatric Publishing.

Antonovsky, A. (1987). Unraveling the mystery of health. San Francisco: Jossey-Bass.

Bell, H. D., & McKenzie, V. (2013). Perceptions and realities: The role of school psychologists in Melbourne, Australia. The Australian Educational and Developmental Psychologist, 30(1), 54–73. https://doi.org/10.1017/edp.2013.1.

Bracha, E., & Bocos, M. (2015). A sense of coherence in teaching situations as a predictor of first year teaching interns’ burnout. Procedia - Social and Behavioral Sciences, 209, 180–187. https://doi.org/10.1016/j.sbspro.2015.11.276.

Chang, E. C., Sanna, L. J., Chang, R., & Bodem, M. R. (2008). A preliminary look at loneliness as a moderator of the link between perfectionism and depressive and anxious symptoms in college students: Does being lonely make perfectionistic strivings more distressing? Behaviour Research and Therapy, 46(7), 877–886.

De Jong Gierveld, J., & Van Tilburg, T. (2006). A 6-item scale for overall, emotional, and social loneliness confirmatory tests on survey data. Research on Aging, 28(5), 582–598. https://doi.org/10.1177/0164027506289723.

Del-Pino-Casado, R., Frias-Osuna, A., Palomino-Moral, P. A., Ruzafa-Martín, M., & Ramos-Morcillo, A. J. (2018). Social support and subjective burden in caregivers of adults and older adults: A meta-analysis. PLoS One, 13(1), e0189874. https://doi.org/10.1371/journal.pone.0189874.

Eagle, D. E., Hybels, C. F., & Proeschold-Bell, R. J. (2019). Perceived social support, received social support, and depression among clergy. Journal of Social and Personal Relationships, 36(7), 2055–2073. https://doi.org/10.1177/026540751776134.

Fernet, C., Torrès, O., Austin, S., & St-Pierre, J. (2016). The psychological costs of owning and managing an SME: Linking job stressors, occupational loneliness, entrepreneurial orientation, and burnout. Burnout Research, 3(2), 45–53. https://doi.org/10.1016/j.burn.2016.03.002.

Gabel Shemueli, R., Dolan, S. L., Suárez Ceretti, A., & Nuñez del Prado, P. (2016). Burnout and engagement as mediators in the relationship between work characteristics and turnover intentions across two Ibero-American nations. Stress and Health, 32(5), 597–606. https://doi.org/10.1002/smi.2667.

Galletta, M., Portoghesi, I., Frau, N., Pau, M., Meloni, F., Finco, G., ... Campagna, M. (2019a). Association between burnout and sense of coherence among speech and language therapists: An exploratory study in Italy. Acta Bio-Medica: Atenei Parmensis, 90(4-S), 25-31. https://doi.org/10.23750/abm.v90i4-S.8261.

Galletta, M., Portoghesi, I., Melis, P., Gonzalez, C. I. A., Finco, G., D’Aloja, E., Contu, P., & Campagna, M. (2019b). The role of collective affective commitment in the relationship between work-family conflict and emotional exhaustion among nurses: A multilevel modeling approach. BMC Nursing, 18(1), 5. https://doi.org/10.1186/s12912-019-0329-z.

Hayes, A. F. (2018). Introduction to mediation, moderation and conditional process analysis (2nd ed.). New York: Guilford Press.

Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. Clinical Psychology Review, 26(6), 695–718.

Hirsch, J. K., Chang, E. C., & Jeglic, E. L. (2012). Social problem solving and suicidal behavior: Ethnic differences in the moderating effects of loneliness and life stress. Archives of Suicide Research, 16(4), 303–315. https://doi.org/10.1080/13811118.2013.722054.

Hobfoll, S. (1989). Conservation of resources: A new attempt at conceptualizing stress. The American Psychologist, 44, 513–524. https://doi.org/10.1037/0003-066X.44.3.513.

Hobfoll, S. E., & Freedy, J. (2017). Conservation of resources: A general stress theory applied to burnout. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), Professional burnout: Recent developments in theory and research (pp. 115–129). London: Routledge.

Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. Annual Review of Organizational Psychology and Organizational Behavior, 5(1), 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640.

Huebner, E. S. (1992). Burnout among school psychologists: An exploratory investigation into its nature, extent, and correlates. School Psychology Quarterly, 7(2), 129–136. https://doi.org/10.1037/h008251.

Huebner, E. S., & Mills, L. B. (1994). Burnout in school psychology. Special Services in the Schools, 8(2), 53–67. https://doi.org/10.1300/J300v08n02_04.

Huo, Y., & Kong, F. (2014). Moderating effects of gender and loneliness on the relationship between self-esteem and life satisfaction in Chinese university students. Social Indicators Research, 118(1), 305–314. https://doi.org/10.1007/s11205-013-0404-x.

Iecovich, E. (2013). Psychometric properties of the Hebrew version of the De Jong Gierveld loneliness scale. Educational Gerontology, 39(1), 12–27. https://doi.org/10.1080/03601277.2012.660860.

Kaeding, A., Sougleris, C., Reid, C., van Vreeswijk, M. F., Hayes, C., Dorrain, J., & Simpson, S. (2017). Professional burnout, early mal-adaptive schemas, and physical health in clinical and counselling psychology trainees. Journal of Clinical Psychology, 73(12), 1782–1796. https://doi.org/10.1002/jclp.22485.

Kahonen, K., Naatanen, P., Tolvanen, A., & Salmela-Aro, K. (2012). Development of sense of coherence during two group interventions.
Scandinavian Journal of Psychology, 53(6), 523–527. https://doi.org/10.1111/sjop.12020.

Kalimo, R., Pakkinen, K., Mutanen, P., & Topipinen-Tanner, S. (2003). Staying well or burning out at work: Work characteristics and personal resources as long-term predictors. Work and Stress, 17(2), 109–122. https://doi.org/10.1080/0267837031000149919.

Keinan, G., & Melamed, S. (1987). Personality characteristics and proneness to burnout: A study among internists. Stress Medicine, 3(4), 307–315. https://doi.org/10.1002/smi.2460030412.

Kellerman, H. (2004). Decisions implementations of the diagnosis and evaluation committee, division of services of the developmentally disabled: The relationship with characteristics of the social worker; the person with the developmental disability and his family. (MA), Bar Ilan, Ramat Gan, Israel. (522).

Ledoux, J. (2015). Understanding compassion fatigue: Understanding compassion. Journal of Advanced Nursing, 71(9), 2041–2050. https://doi.org/10.1111/jan.12686.

Levert, T., Lucas, M., & Ortlepp, K. (2000). Burnout in psychiatric nurses: Contributions of the work environment and a sense of coherence. South Africa Journal of Psychology, 30(2), 36–43. https://doi.org/10.1177/0296425X0003002005.

Lin, S. H., & Huang, Y. C. (2012). Investigating the relationships between loneliness and learning burnout. Active Learning in Higher Education, 13(3), 231–243. https://doi.org/10.1177/1469787412452983.

Margalit, M. (2012). Lonely children and adolescents, self-perceptions, social exclusion and hope. New York: Springer.

Martozzi, B., Cranzanski-Cohen, J., Weilks, K. L., & Stanton, A. L. (2016). Implicit loneliness, emotion regulation, and depressive symptoms in breast cancer survivors. Journal of Behavioral Medicine, 39(5), 832–844. https://doi.org/10.1007/s10865-016-9751-9.

Maslach, C. (2001). What have we learned about burnout and health? Psychology & Health, 16(5), 607–611. https://doi.org/10.1080/08870440108405530.

Maslach, C. (2018). Job burnout in professional and economic contexts. In A. A. Ariyanto, H. Muluk, P. Newcombe, F. P. Pirecy, E. K. Poerwandari, & S. H. R. Suradijono (Eds.), Diversity in unity: Perspectives from psychology and behavioral sciences (pp. 11–15). London: Routledge.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. Journal of Organizational Behavior, 2(2), 99–113. https://doi.org/10.1002/job.4030020205.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). Maslach Burnout Inventory manual (3rd ed.). Palo Alto: Consulting Psychologists Press.

Mills, L. B., & Huebner, E. S. (1998). A prospective study of personality characteristics, occupational stressors, and burnout among school psychology practitioners. Journal of School Psychology, 36(1), 103–120. https://doi.org/10.1016/S0022-4405(97)00053-8.

Mittelmark, M. B., Sagy, S., Eriksson, M., Bauer, G. F., Pelikan, J. M., Lindstrom, B., & Espnes, G. A. (2017). The handbook of Salutogenesis. Zürich: Springer.

National Academy of Medicine. (2019). Taking action against clinician burnout: A systems approach to professional well-being. Washington, DC: National Academies Press.

Peplau, L. A., & Perlman, D. (1982). Perspectives on loneliness. In L. A. Peplau & D. Perlman (Eds.), Loneliness: A sourcebook of current theory, research and therapy (pp. 1–18). New York: Wiley.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behavior Research Methods, 40(3), 879–891. https://doi.org/10.3758/BRM.40.3.879.

Rodriguez, S. Y. S., & Carlitto, M. S. (2017). Predictors of burnout syndrome in psychologists. Estados de Psicología, 34, 141–150.

Ross, M. R., Powell, S. R., & Elias, M. (2002). New roles for school psychologists: Addressing the social and emotional learning needs of students. School Psychology Review, 31(1), 43–52.

Sandoval, J. (1993). Personality and burnout among school psychologists. Psychology in the Schools, 30(4), 321–326. https://doi.org/10.1002/1520-6807(199310)30:4<321::aid-pits2310300406>3.0.co;2-j.

Schilling, E. J., Randolph, M., & Boan-Lenzo, C. (2018). Job burnout in school psychology: How big is the problem? Contemporary School Psychology, 22(3), 324–331. https://doi.org/10.1007/s40688-017-0138-x.

Seppala, E. (2017). The happiness track: How to apply the science of happiness to accelerate your success. New York: HarperCollins.

Seppala, E., & King, M. (2017). Burnout at work isn’t just about exhaustion. It’s also about loneliness. Harvard Business Review, 29, 2–4.

Shapiro, J., Zhang, B., & Warm, E. J. (2015). Residency as a social network: Burnout, loneliness, and social network centrality. Journal of Graduate Medical Education, 7(4), 617–623. https://doi.org/10.4300/JGME-D-15-00038.1.

Shirom, A., & Melamed, S. (2006). A comparison of the construct validity of two burnout measures in two groups of professionals. International Journal of Stress Management, 13(2), 176–200. https://doi.org/10.1037/1072-5245.13.2.176.

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 & Youth Services, 38(2), 159–175. https://doi.org/10.1080/0145935X.2017.1297225.

Weber, A., & Jaekel-Reinhard, A. (2000). Burnout syndrome: A disease of modern societies? Occupational Medicine, 50(7), 512–517. https://doi.org/10.1093/occmmed/50.7.512.

World Health Organization. (2018). International classification of diseases for mortality and morbidity statistics (11th Revision). Retrieved from https://icd.who.int/browse11/l-m/en

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