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The authors conducted a pilot study on the effects of a mindfulness-based stress reduction (MBSR) educational intervention on mental health professionals' self-compassion, perceived stress, burnout, and quality of life. Data were obtained from 22 female mental healthcare workers between the ages of 24 and 69 years who were enrolled in one of four separate 8-week MBSR courses. Pre- and post-assessment measures consisted of the Self-Compassion Scale (SCS), Maslach Burnout Inventory, and Quality of Life Inventory. The changes on the SCS total score proved significant with a *p*-value of .003. Within the SCS, changes were significant on four out of the six subscales. The study is unique in its use of the eight-week MBSR intervention to target mental health professionals currently working in the field, and in the examination of the specific facets of self-compassion enhanced by this type of intervention.

Keywords: mindfulness; self-compassion; mental healthcare professionals' well-being

Those who work in the field of health care know that being able to "bear with the suffering of others" is essential (Figley, 2002a, 2002b). Care is one component of compassion (Wollenburg, 2004), and the action of caring has the potential to alleviate an individual's suffering (Kret, 2011). There is a surge of interest in the well-being of those same doctors, nurses, psychologists and other healthcare providers who provide treatment. Stress has been shown to reduce clinicians' attention and concentration, detract from decision-making skills, diminish effective communication, as well as contribute to various physical health problems, including fatigue, insomnia, heart disease, depression, and obesity (Enochs & Etzback, 2004; Miller, Stiff, & Ellis, 1988; Spickard, Gabbe, & Christensen, 2002). Workers in the healthcare sector are particularly vulnerable to stress overload and burnout (Harris, 2001; Moore & Cooper, 1996; Sharkey & Sharples, 2003; Wall et al., 1997).

Moore and Cooper (1996) suggest that mental health workers, in particular, are subject to high levels of stress due to working in an emotionally draining workplace. Mental health workers reportedly experience increased anxiety, depression, mental fatigue, and strained interpersonal relationships (Myers, 1994; Radeke & Mahoney, 2000; Tyssen, Vaglum, Gronvold, &

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Ekeberg, 2001). Moore and Cooper (1996) argue that mental health professionals are particularly vulnerable to severe emotional exhaustion and psychological tension that is beyond, and qualitatively different from, other organisational stressors. In a survey conducted by Shinn, Rosario, Morch, and Chestnut (1984), lack of positive reinforcement or recognition for good work, as a source of dissatisfaction or stress, was reported by 44% of mental health professionals. Moore and Cooper state: "In these situations, there may be a 'gap' between therapist expectations and personal achievement if the latter is rated in terms of therapeutic outcome" (1996, p. 84). Because clients with severe and chronic mental illnesses often do not make dramatic improvements, the demands or expectations mental health professionals make of themselves may contribute to their level of stress and overall exhaustion.

Ironically, the ability to empathise – an important skill in therapeutic work – is linked to the susceptibility to compassion fatigue (Figley, 1995, 2002a). Compassion fatigue expert Charles Figley (2002b) states:

> … we cannot avoid our compassion and empathy. They provide the tools required in the art of human service. To see the world as our clients see it enable us to calibrate our services to fit them and to adjust our services to fit how they are proceeding. (p. 1434)

While it is vital that caregivers continue to work with empathy and compassion, there is an obvious cost to this work.

Mindfulness and self-compassion have seen much attention in recent years as a means of resiliency against stress, burnout, and emotional exhaustion. There is growing interest in the use of mindfulness-based interventions to reduce stress and increase self-compassion and self-care in healthcare professionals (Shapiro & Carlson, 2009).

Mindfulness is a form of meditation originally developed from the Theravada tradition of Buddhism (Hanh, 1976). The 2500-year-old practice known as Vipassana was developed as a means of cultivating greater awareness and insight (Goldstein, 1976). Right mindfulness is the seventh component of the Eightfold Path of Buddhism, the term "mindfulness" often translated as "to see with discernment". Other strategies to address burnout in healthcare professionals include reflective practice (Edward & Hercelinskyj, 2007); staff renewal retreats (Henry, 2014); mantram repetition (Bormann et al., 2006); peer support groups (Peterson, Bergström, Samuelsson, Asberg, & Nygren, 2008); and clinical supervision (Rice et al., 2007).

Raab (2014) conducted a literature review on the relationship between mindfulness and self-compassion in the context of healthcare workers' compassion fatigue and burnout. She found that enhancing a self-compassion focus through mindfulness-based stress reduction (MBSR) training is a primary research agenda, in that both mindfulness and self-compassion involve promoting an attitude of nonjudgment towards one's experiences. Enhancing focus on developing self-compassion in MBSR, or other mindfulness-based interventions, may bring direct benefits in terms of reducing maladaptive cognitive coping tendencies and increasing the willingness to accept and experience emotions (Raab, 2014). Research suggests that mindfulness training for healthcare professionals can function as a viable tool for promoting self-care and well-being (Irving, Dobkin, & Park, 2009). Mindfulness, moreover, is seen as an important foundation and component of compassion (Gilbert, 2010; Tirch, 2010). Some researchers have suggested compassion as a quality of mindfulness (Shapiro & Schwartz, 2000) and others as an outcome of mindfulness practice (Bishop et al., 2004; Gilbert & Tirch 2009; Walsh, 2008). Concerning mental health professionals, increased self-compassion through MBSR programmes is particularly relevant (Shapiro, Brown, & Biegel, 2007), since compassion for both self and clients has been posited as an essential part of conducting effective therapy (Gilbert, 2005).

We conducted a pilot study on the effects of a MBSR educational intervention on mental health professionals' self-compassion, perceived stress, burnout, and quality of life. We hypothesised that cultivating mindfulness practice in healthcare professionals would lead to increases in perceptions of self-compassion and quality of life, and reductions in self-assessed stress and burnout.

The study was conducted from March 2011 to February 2013 at a large Canadian mental health centre in an urban setting. It was a collaborative effort involving two discipline divisions, Psychology and Spiritual/Cultural Care, and the Institute of Mental Health Research affiliated with a teaching and research university. The initiative for the study was to examine ways that the psychology professional practice community and the spiritual/cultural practice community could work together to enhance a compassionate patient care environment and reduce healthcare workers' sense of burnout within a large multi-site mental healthcare organisation.

Method

Participants

The participants were all mental health professionals involved in direct patient care who completed a voluntary MBSR course provided on-site at the mental health centre. The study had a prospective design with standardised measures of self-compassion, burnout, and quality of life administered prior to and following the MBSR intervention. Data were obtained from 22 female mental healthcare workers between the ages of 24 and 69 years who were enrolled in one of four separate 8-week MBSR courses taught by certified MBSR instructors. Participants, identified by an ID code that allowed matching of participants' pre- and post-intervention questionnaires, were asked to complete confidential self-report questionnaires at the beginning of the first session and at the end of the final session. The study was approved by the Research Ethics Board.

MBSR programme

The intervention closely followed the MBSR curriculum developed by Kabat-Zinn (Kabat-Zinn, 1982). It consisted of 8 weekly 2.5 hour-long classes and one "day of silence" in between the 6th and 7th weeks. Key elements of the programme included: (1) group format with socratic dialogue following each period of group practice; (2) emphasis upon non-conceptual learning and non-goal orientation; (3) variety of meditation techniques – body scan, sitting and walking meditation, and hatha yoga; and (4) strong emphasis on the necessity of home practice and applying skills learned each week outside of class. A loving-kindness meditation (LKM) was taught in addition to standard techniques.

Assessment measures

Self-Compassion Scale

The Self-Compassion Scale (SCS) is a 26 item measure which seeks to assess the three components of self-compassion, that is, *self-kindness*, *common humanity*, and *mindfulness* (Neff, 2003a, 2003b). The items are rated on a five-point Likert-type scale, where each item corresponds to either a positive or negative assessment of the three components of self-compassion. Mean scores are calculated for six individual subscales (self-kindness/self-judgment, common humanity/isolation, mindfulness/over-identification) and a total composite total score is obtained by reverse coding the self-judgment, isolation, and over-identification items then summing the six

subscale means. Across subscales, the SCS has demonstrated good internal consistency (Cronbach alpha = .77–.78) and test–retest reliability (r = .80–.93) (Neff, 2003a), as well as good concurrent validity, convergent validity, and discriminant validity (Neff, Kirkpatrick, & Rude, 2007). The internal consistency reliability for a single higher order factor of self-compassion was alpha = .97 (Neff, 2003a; Neff & Pommier, 2012).

Maslach Burnout Inventory-Human Services

The Maslach Burnout Inventory (MASLACHBI) is a measure designed to assess various aspects of the burnout syndrome in healthcare workers (Maslach & Jackson, 1981). The MASLACHBI for human services is composed of 22 statements, rated for frequency (from 0 = never, to 6 = every day). The measure consists of three subscales: emotional exhaustion, depersonalization, and personal accomplishment. Subscale measures are expressed as the mean of relevant items. The MASLACHBI was found to exhibit high test–retest reliability (r = .53–.82) and internal consistency (Cronbach alpha = .57–.89), and the burnout construct was shown to be valid (Maslach & Jackson, 1981).

Quality of life inventory

The Quality of Life Inventory (QOLI) consists of 17 items deemed to represent 17 areas of life potentially relevant to life satisfaction (Frisch et al., 1992). Each is rated by respondents in terms of its importance to their overall happiness (from 0 = not at all important, to 2 = extremely important), and in terms of their satisfaction with the area (from −3 = very dissatisfied, to 3 = very satisfied). The products of the satisfaction and importance ratings are computed for each area (weighted satisfaction ratings, from −6 to +6). These scores are used to calculate a weighted satisfaction score (importance multiplied by satisfaction). The overall life satisfaction, or QOLI score, is obtained by averaging all weighted satisfaction ratings that have nonzero importance ratings. It can be converted into percentiles based on normative data obtained from several adult and college-age samples. Test–retest coefficients for the QOLI score ranged from .80 to .91, and internal consistency coefficients from .77 to .89 across 3 clinical and 3 non-clinical samples (Frisch, Cornell, Villanueva, & Retzlaff, 1992).

Statistical analyses

Paired sample *t*-tests were performed to compare scores pre- and post- mindfulness training in the group of 22 female mental healthcare workers. The primary outcome measure was the SCS total score. A significant difference in the total score (at the p = .05 level) was explored through additional paired *t*-tests on the six subscales of the SCS. Secondary outcome measures were the three subscales of the MASLACHBI, that is, emotional exhaustion, depersonalization, and personal accomplishment, and the percentile score on the QOLI.

Results

Table 1 displays the participants' mean scores prior to and after mindfulness training on all the study measures and the results of pre- to post-intervention comparisons. As shown, the change on the SCS total score proved significant with a *p*-value of .003. This result suggests that MBSR training significantly improved overall self-compassion in the study sample.

Within the SCS, changes were significant on four of the six subscales. A significant decrease was observed on the self-judgment subscale (p = .004), which may reflect reduced negative self-

Table 1. Mean scores (*M*) and standard deviations (SD) on measures of self-compassion, burnout, and quality of life, completed by healthcare workers before and after MBSR training. Pre- and post-intervention scores are compared using paired *t*-tests.

Measure	*n*	Before MBSR		After MBSR		95% CI for mean difference lower/upper	*df*	*t*	*p*
		M	SD	*M*	SD				
SCS									
Total score (sum of subscale mean scores)	22	19.37	4.20	21.37	3.93	[−3.25, −.75]	21	3.32	.003
Self-kindness (mean score)	22	3.18	.80	3.35	.75	[−.43, .09]	21	1.37	.184
Self-judgment (mean score)	22	2.91	.78	2.36	.74	[.21, .88]	21	3.37	.003
Common humanity (mean score)	22	3.19	1.06	3.60	1.01	[−.80, −.03]	21	2.26	.034
Isolation (mean score)	22	2.64	.82	2.35	.85	[.02, .55]	21	2.24	.037
Mindfulness (mean score)	22	3.55	.79	3.76	.81	[−.54, .11]	21	1.39	.179
Over-identification (mean score)	22	3.00	.85	2.61	.85	[.07, .70]	21	2.57	.018
Maslach Burnout Inventory-Human Services									
Personal accomplishment (mean score)	22	4.72	.98	4.91	.91	[−.53, .11]	21	1.36	.189
Emotional exhaustion (mean score)	22	2.13	1.21	1.89	1.09	[−.15, .58]	21	1.25	.228
Depersonalisation (mean score)	22	.73	.93	.64	.66	[−.24, .41]	21	.55	.586
QOLI									
Percentile score	22	60.27	29.48	60.73	26.68	[−.43, .09]	21	.08	.935

talk, as well as greater tolerance and patience for disliked aspects of one's personality. The common humanity subscale indicated a significant improvement (*p* = .03), indicating that mindfulness training increased participants' ability to see their failures as part of the common human experience. The isolation subscale demonstrated a significant decrease (*p* = .04), suggesting that the mindfulness training was effective at reducing feelings of isolation in instances of failure, that is, feeling less cut off from the rest of the world when considering one's own inadequacies. Finally, over-identification, which is the tendency to become overwhelmed by negative events, thoughts, and emotions, was significantly reduced through mindfulness training (*p* = .02), suggesting that participants were less likely to run away with negative thoughts and emotions.

Results from the MASLACHBI and the QOLI did not yield any statistically significant pre- to post-intervention changes, which indicated that, in the study population, mindfulness training did not change perceptions of burnout in the workplace or overall quality of life. The MASLACHBI scores indicated relatively high personal accomplishment, relatively low depersonalisation, and mid-range emotional exhaustion, both pre- and post-intervention. The QOLI percentile remained in the 60th percentile pre- and post-intervention.

Discussion

Our study is unique in its focus on an MBSR intervention for trained mental healthcare clinicians currently working in the field, thus expanding findings from previous research showing that mindfulness-based interventions can increase self-compassion in healthcare professionals in general. As stated, mental healthcare workers face particular challenges posed by clients with chronic and complex psychological disorders and treatment needs (Moore & Cooper, 1996). Results from the study also provide new evidence regarding the specific facets of self-compassion

significantly altered through MBSR training. The three "negative" assessments identified as self-judgment, isolation, and over-identification decreased significantly from pre- to post-intervention, while one of the three "positive" assessments, namely common humanity, increased significantly, with trends in the same directions for self-kindness and mindfulness. These findings support the notion of self-compassion as either a quality or outcome of mindfulness practice.

It is useful to compare our results with those found by Boellinghaus, Jones, and Hutton (2014), who conducted a literature review examining the effectiveness of mindfulness-based interventions (MBIs) and LKM in cultivating clinicians' self-compassion and other-focused concern. In total, eight quantitative studies and four qualitative studies on MBIs for healthcare professionals were reviewed, all measuring self-compassion using the SCS total score as an outcome measure. The authors concluded that the studies reviewed offered support for the hypothesis that MBIs can increase self-compassion in healthcare professionals. Moreover, results indicated that interventions designed to support clinicians in cultivating self-compassion have the potential to reduce empathetic distress and burnout and maintain well-being. While our study used as a sample mental healthcare workers, the MBI intervention studies reviewed by both Boellinghaus et al. (2014) and Irving et al. (2009) used as study samples either counselling psychology students, psychology trainees, medical students or a sampling of healthcare workers. We suggest that studies conducted with students or trainees, while useful, may miss some of the challenges faced by mental healthcare workers employed in hospitals and community agencies, such as compassion fatigue related to long-term exposure.

It is also worth comparing our results with those of two additional studies conducted among mental health professionals using an MBI. Neither study, however, used the eight-week MBSR curriculum developed by Kabat-Zinn (1982), and neither study measured self-compassion. Salyers et al. (2011) conducted a day-long programme called "BREATHE" for participants at a public agency providing comprehensive mental health and substance abuse services at a large Midwestern city in the USA. "BREATHE" consisted of training in mindfulness and contemplative practices, breathing and visualisation exercises, and in setting priorities and boundaries. Results indicated reductions in burnout as measured on the Maslach Burnout Inventory. As an alternative to the traditional eight-week MBSR programme, Brady, O'Connor, Burgermeister, and Hanson (2012) provided a modified MBSR programme for staff working in an inpatient behavioural health unit in a large Midwestern hospital also in the USA. The traditional programme was modified to one hour per week for four weeks, with sessions in learning and practicing meditation and in applying mindfulness to daily activities such as driving and eating. Brady et al.'s study yielded an increase in mindfulness and sense of self-acceptance, among other benefits. Similar to our study, there was no statistically significant change in burnout as measured on the MASLACHBI. Our study is similar to Brady et al.'s in its use of a mixed sample of mental health clinicians, whereas Salyers et al.'s sample included clinicians, administrators, and support staff.

In our study as in Brady et al. (2012), no significant differences were observed from pre- to post-intervention on measures of burnout, maybe due to the small sample size in both studies, and the fact that participants were mixed groups of mental health professionals, hence preventing measurement of burnout in any one discipline. In Salyers et al.'s (2011) study, participants were provided with a toolkit to use in identifying personal burnout warning signs and triggers and in outlining a follow-up personalised burnout prevention plan. Specific targeting of burnout may be one reason for reduced burnout scores as measured pre- and post-"BREATHE" training.

In our study, the score for quality of life was in the 60th percentile both pre- and post-mindfulness training, which reflected the fact that the study population was not a clinical population,

and had relatively high life satisfaction prior to engaging in the intervention. Moreover, mental healthcare workers at our institution receive training in self-care from other sources.

As stated, our results indicate that several facets of self-compassion were modified by the mindfulness intervention, that is, self-judgment, common humanity, isolation, and over-identification. These results support Neff's (2003a) suggestion that in order for individuals to fully experience self-compassion, they must be mindful, that is, they must not avoid or repress painful feelings nor become over-identified with them. We found this quotation apt: "… if one stops judging and berating oneself long enough to experience a degree of self-kindness, the impact of negative emotional experiences will be lessened, making it easier to maintain balanced awareness of one's thoughts and emotions" (Neff, 2003a, p. 25).

Our sample consisted exclusively of women. In Neff's study (2003a), women reported significantly lower self-compassion than men, and differences on the self-compassion subscales indicated that women were more likely than men to engage in self-judgment. Other studies (Leadbeater, Kupermine, Blatt, & Hertzog, 1999; Nolen-Hoeksema, 1987) also indicated that females tend to be more critical of themselves than men, which has been associated with a higher incidence of depression among women (Nolen-Hoeksema, 1987). Thus, the potential benefits of mindfulness training could be particularly relevant for women, who represent a large majority of mental healthcare workers.

In conclusion, perhaps one of the most daunting challenges for mental health practitioners is to respond to their perceived failures with greater mindfulness and self-compassion. If, as Selye (1976) suggests, stress is challenge plus perception, then mental health practitioners could derive enormous benefit by relating with greater self-compassion to their perceptions of failure within an admittedly stressful workplace environment, one where often clients do not exhibit significant improvement. This study points to the need for additional research on mindfulness and self-compassion interventions for mental healthcare workers, particularly exploring whether MBIs alone are sufficient to generate self-compassion or whether specific self-compassion techniques are needed to augment such interventions.

Study limitations

The study reported here followed an open trial design; therefore any contributing expectation effect cannot be ruled out. Also, the mindfulness training was offered at low cost to mental healthcare workers during their working time. Under those conditions, participants' motivation for change, and their adherence to homework assignments, may be lower than in those who make more individual effort for seeking and supporting their treatment.

Conclusion

For multiple reasons (e.g., the nature of the work, the "caregiver" mentality, limited resources for sustained professional training), stress, burnout, and compassion fatigue will likely continue to be issues facing healthcare workers (Irving et al., 2009). Our study confirms previous research showing that MBSR yields benefits for healthcare professionals in the domains of self-compassion (Irving et al., 2009). It is unique in its use of the eight-week MBSR intervention (Kabat-Zinn, 1982) to target mental health professionals currently working in the field, and in the examination of the specific facets of self-compassion enhanced by this type of intervention. The study points to the need for additional research on the relationship between mindfulness and self-compassion in mental healthcare workers, using a more rigorous and controlled design. Ironically, the mental health field has paid scant attention to the health and well-being of its own workers (Morse, Salyers, Rollins, Monroe-Devita, & Pfahler, 2012). The findings of

this study will be used in the design and evaluation of educational interventions to improve mental health professionals' capacity for mindfulness and self-care in the face of an at times overwhelming emotional environment. We believe that such educational interventions could be beneficial in other cultural contexts that share factors similar to the Canadian milieu of our study: namely, in mental healthcare organisations with a predominance of female workers, with participants who have some prior understanding of the concepts of mindfulness and self-compassion, and in organisations with the means to offer such training during the workday.

References

Bishop, S. Lau, M., Shapiro, S., Carlson, L., Anderson, N., Carmody, J., … Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, *11*, 230–241. doi:10.1093/clipsy.bph077

Boellinghaus, I., Jones, F. W., & Hutton, J. (2014). The role of mindfulness and loving-kindness meditation in cultivating self-compassion and other-focused concern in health care professionals. *Mindfulness*, *5*, 129–138. doi:10.1007/s12671-012-0158-6

Bormann, J., Becker, S., Gershwin, M., Kelly, A., Pada, L., Smith, T., & Gifford, A. (2006). Relationship of frequent mantram repetition to emotional and spiritual well-being in healthcare workers. *The Journal of Continuing Education in Nursing*, *37*, 218–224. doi:10.3928/00220124-20060901-02

Brady, S., O'Connor, N., Burgermeister, D., & Hanson, P. (2012). The impact of mindfulness meditation in promoting a culture of safety on an acute psychiatric unit. *Perspectives in Psychiatric Care*, *48*, 129–137. doi:10.1111/j.1744-6163.2011.00315.x

Edward, K., & Hercelinskyj, G. (2007). Burnout in the caring nurse: Learning resilient behaviours. *British Journal of Nursing*, *16*, 240–242. doi:10.12968/bjon.2007.16.4.22987

Enochs, W. K., & Etzback, C. A. (2004). Impaired student counselors: Ethical and legal considerations for the family. *Family Journal*, *12*, 396–400. doi:10.1177/1066480704267240

Figley, C. R. (1995). Compassion fatigue as secondary traumatic stress disorder: An overview. In C.R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized* (pp. 1–20). New York, NY: Routledge.

Figley, C. R. (2002a). Compassion fatigue: Psychotherapists' chronic lack of self care. *Journal of Clinical Psychology*, *58*, 1433–1441. doi:10.1002/jclp.10090

Figley, C. R. (Ed.) (2002b). *Treating compassion fatigue*. New York, NY: Brunner-Routledge.

Frisch, M. B., Cornell, J., Villanueva, M., & Retzlaff, P. J. (1992). Clinical validation of the Quality of Life Inventory: A measure of life satisfaction for use in treatment planning and outcome assessment. *Psychological Assessment*, *4*, 92–101. doi:10.1037/1040-3590.4.1.92

Gilbert, P. (Ed). (2005). *Compassion: Conceptualizations, research, and use in psychotherapy*. New York, NY: Routledge.

Gilbert, P. (2010). *Compassion focused therapy*. London: Routledge.

Gilbert, P., & Tirch, D. (2009). Emotional memory, mindfulness and compassion. In F. Didonna (Ed.), *Clinical handbook of mindfulness* (pp. 99–110). New York, NY: Springer.

Goldstein, J. (1976). *The experience of insight*. Boston, MA: Shambhala.

Hanh, T. N. (1976). *The miracle of mindfulness: A manual of meditation*. Boston, MA: Beacon Press.

Harris, N. (2001). Management of work-related stress in nursing. *Nursing Standard*, *16*, 47–52. doi:10.7748/ns2001.11.16.10.47.c3122

Henry, B. (2014). Nursing burnout interventions: What is being done? *Clinical Journal of Oncology Nursing*, *18*, 211–214. doi:10.1188/14.CJON.211-214

Irving, J., Dobkin, P., & Park, J. (2009). Cultivating mindfulness in health care professionals: A review of empirical studies of mindfulness-based stress reduction (MBSR). *Complementary Therapies in Clinical Practice*, *15*, 61–66. doi:10.1016/j.ctcp.2009.01.002

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry*, *4*, 33–47. doi:10.1016/0163-8343(82)90026-3

Kret, D. D. (2011). The qualities of a compassionate nurse according to the perceptions of medical-surgical patients. *MEDSURG Nursing*, *20*, 29–36.

Leadbeater, B. J., Kupermine, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology*, *35*, 1268–1282. doi:10.1037/0012-1649.35.5.1268

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

Miller, K. I., Stiff, J. B., & Ellis, B. H. (1988). Communication and empathy as precursors to burnout among human service workers. *Communication Monographs*, *55*, 250–265. doi:10.1080/03637758809376171

Moore, K., & Cooper, C. (1996). Stress in mental health professionals: A theoretical overview. *International Journal of Social Psychiatry*, *42*, 82–89. doi:10.1177/002076409604200202

Morse, G., Salyers, M. P., Rollins, A. L., Monroe-Devita, M., & Pfahler, C. (2012). Burnout in mental health services: A review of the problem and its remediation. *Administration and Policy in Mental Health and Mental Health Services Research*, *39*, 341–352. doi:10.1007/s10488-011-0352-1

Myers, D. (1994). *Disaster response and recovery: A handbook for mental health professionals*. Rockville, MD: Centre for Mental Health Services.

Neff, K. D. (2003a). The development and validation of a scale to measure self- compassion. *Self and Identity*, *2*, 223–250. doi:10.1080/15298860309027

Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, *2*, 85–101. doi:10.1080/15298860309032

Neff, K. D., Kirkpatrick, K., & Rude, S. S. (2007). Self-compassion and its link to adaptive psychological functioning. *Journal of Research in Personality*, *41*, 139–154. doi:10.1016/j.jrp.2006.03.004

Neff, K. D. & Pommier, E. (2012). The relationship between self-compassion and other-focused concern among college undergraduates, community adults, and practicing meditators. *Self and Identity*, *12*, 160–176. doi:10.1080/15298868.2011.649546

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin*, *101*, 259–282. doi:10.1037/0033-2909.101.2.259

Peterson, U., Bergström, G., Samuelsson, M., Asberg, M., & Nygren, A. (2008). Reflecting peer-support groups in the prevention of stress and burnout: Randomized controlled trial. *Journal of Advanced Nursing*, *63*, 506–516. doi:10.1111/j.1365-2648.2008.04743.x

Raab, K. (2014). Mindfulness, self-compassion, and empathy among health care professionals: A review of the literature. *Journal of Health Care Chaplaincy*, *20*, 95–108. doi:10.1080/08854726.2014.913876

Radeke, J., & Mahoney, M. J. (2000). Comparing the personal lives of psychotherapists and research psychologists. *Professional Psychology: Research and Practice*, *31*, 82–84. doi:10.1037/0735-7028.31.1.82

Rice, F., Cullen, P., McKenna, H., Kelly, B., Keeney, S., & Richey, R. (2007). Clinical supervision for mental health nurses in Northern Ireland: Formulating best practice guidelines. *Journal of Psychiatric and Mental Health Nursing*, *14*, 516–521. doi:10.1111/j.1365-2850.2007.01101.x

Salyers, M. P., Hudson, C., Morse, G., Rollins, A. L., Monroe-DeVita, M., Wilson, C., & Freeland, L. (2011). BREATHE: A pilot study of a one-day retreat to reduce burnout among mental health professionals. *Psychiatric Services*, *62*, 214–217. doi:10.1176/ps.62.2.pss6202_0214

Selye, H. (1976). *Stress in health and disease*. Reading, MA: Butterworth.

Shapiro, S. L., Brown, K., & Biegel, G. (2007). Self-care for health care professionals: Effects of MBSR on mental well-being of counseling psychology students. *Training and Education in Professional Psychology*, *1*, 105–115. doi:10.1037/1931-3918.1.2.105

Shapiro, S. L., & Carlson, L. E. (2009). *The art and science of mindfulness: Integrating mindfulness into psychology and the helping professions*. Washington, DC: American Psychological Association.

Shapiro, S., & Schwartz, G. (2000). The role of intention in self-regulation: Toward intentional systemic mindfulness. In M. Boekarts, P.R. Pintrich, & M. Zeider (Eds.), *Handbook of self-regulation* (pp. 253–273). Melbourne: Elsevier.

Sharkey, S. & Sharples, A. (2003). The impact of work-related stress of mental health teams following team-based learning on clinical risk management. *Journal of Psychiatric and Mental Health Nursing*, *10*, 73–81. doi:10.1046/j.1365-2850.2003.00534.x

Shinn, M., Rosario, M., Morch, H., & Chestnut, D. E. (1984). Coping with job stress and burnout in the human services. *Journal of Personality and Social Psychology*, *46*, 864–876. doi:10.1037/0022-3514.46.4.864

Spickard, A., Gabbe, S. G., & Christensen, J. F. (2002). Mid-career burnout in generalist and specialist physicians. *Journal of the American Medical Association*, *288*, 1447–1450. doi:10.1001/jama.288.12.1447

Tirch, D. D. (2010). Mindfulness as a context for the cultivation of compassion. *International Journal of Cognitive Therapy*, *3*, 113–123. doi:10.1521/ijct.2010.3.2.113

Tyssen, R., Vaglum, P., Gronvold, N. T., & Ekeberg, O. (2001). Factors in medical school that predict postgraduate mental health problems in need of treatment. A nationwide and longitudinal study. *Medical Education*, *35*, 110–120. doi:10.1046/j.1365-2923.2001.00770.x

Wall, T. D., Bolden, R. I., Borrilla, C. S., Carter, A. J., Golya, D. A., Hardy, G. E., … West, M. A. (1997). Minor psychiatric disorder in NHS trust staff: Occupational and gender differences. *British Journal of Psychiatry*, *171*, 519–523. doi:10.1192/bjp.171.6.519

Walsh, R. A. (2008). Mindfulness and empathy. In S. F. Hick & T. Bien (Eds.), *Mindfulness and the therapeutic relationship* (pp. 72–86). New York, NY: Guildford Press.

Wollenburg, K. (2004). Leadership with conscience, compassion, and commitment. *American Journal of Health-System Pharmacy. Official Journal of the American Society of Health*, *61*, 1785–1791.