"Tired of Caring": The Impact of Caring on Resident Doctors

Peter Huggard[1]
Robyn Dixon[2]

[1] Goodfellow Unit, Department of General Practice & Primary Health Care, Faculty of Medical and Health Sciences, University of Auckland, New Zealand

[2] School of Nursing, Faculty of Medical and Health Sciences, University of Auckland, New Zealand

Author correspondence:
Dr Peter Huggard, Goodfellow Unit,
Department of General Practice & Primary Health Care,
Faculty of Medical and Health Sciences,
University of Auckland, P. O. Box 92019, Auckland,
New Zealand.
Email: p.huggard@auckland.ac.nz

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Abstract

Compassion fatigue, also referred to as secondary traumatic stress, is increasingly being acknowledged as a possible consequence of working in any helping and caring profession. Previous research has focused on examining this construct in a variety of health professionals – social workers, counsellors, psychologists and nurses; however, little attention has been paid to this experience in doctors. This research examined the presence of compassion fatigue in doctors. A self-selected sample of 253 doctors, working in four locations in New Zealand and training in a variety of specialty disciplines, participated in this research by completing an anonymous questionnaire which included the ProQOL (Professional Quality of Life) instrument. This instrument measures compassion fatigue, burnout and compassion satisfaction. Results indicated that 17.1% of the sample appeared to be at risk for compassion fatigue as indicated by a high score on that subscale of the ProQOL, and 19.5% at risk of burnout. These results are similar to those reported in studies of other health professionals and suggest a need for caution on the part of clinicians and employers as to the potentially emotionally demanding aspects of patient care.

Keywords: *Physicians, compassion fatigue, burnout, compassion satisfaction, vicarious trauma*

Introduction

Burnout (BO), a term first used by Freudenberger (1974), is a state of physical, emotional, and mental exhaustion caused by long-term involvement in emotionally-demanding situations. It is the result of a transitional process, moving from an imbalance between resources and demands to psychological accommodation (Cherniss, 1980). Maslach and Jackson (1981) identified three components of burnout – emotional exhaustion, depersonalisation, and feelings of reduced personal accomplishment. Emotional exhaustion has been reported as a significant contributor to the stress experienced by doctors (Deckard, Meterko, & Field, 1994).

Previous studies of physicians have demonstrated their struggle with the emotional demands of their work (Balch, Freischlag & Shanafelt, 2009), and its impact on the quality of patient care (Shanafelt, Bradley, Wipf, & Back, 2002). In the past 20 years, researchers have been investigating the positive and negative effects of caring on the carer. Different terms have been proposed to describe these effects. In the first instance, McCann & Pearlman (1990) introduced the concept of vicarious trauma. They suggested that this may occur in those who work with traumatised individuals and can give rise to considerable psychological effects. These effects can be disruptive and distressing for the helper and can continue for a long time after the therapeutic association with the traumatised person ceases. The construct of compassion fatigue was described by Figley (1995) as a naturally occurring response as a consequence of knowing about the traumatic experiences of significant others. Another lead researcher at this time, Stamm (1995), focused on secondary traumatic stress, and describes this as negative emotions resulting from fear experienced in the workplace, and /or work-related exposure to the traumatic experiences of others.

Some authors have noted the inconsistencies in the conceptualization and measurement of compassion fatigue, secondary traumatic stress and vicarious traumatisation and made attempts to separate the definitions (Baird & Kracen, 2006; Thomas & Wilson, 2004). While there appear to be similarities between the constructs, they each contribute to an understanding of

the positive and negative aspects of caring. Vicarious traumatization describes a state of emotional and psychological health over time, with both vicarious traumatisation and vicarious transformation being processes that describe an individual's development of their self-awareness and self-perception. Compassion satisfaction and compassion fatigue focus on an individual's current experiences in working with traumatised persons. (Huggard, Stamm & Pearlman, 2011). The most common measure of these constructs is the Professional Quality of Life (ProQOL). This instrument includes scales for compassion fatigue, burnout, and compassion satisfaction. At the time of the current study, conceptualization of the compassion fatigue construct, as incorporated in the ProQOL (version 3), was described as being the same, or at least similar to secondary traumatic stress (Stamm, 2005). More recent conceptualisation and analysis of the constructs by Stamm (2009) views compassion satisfaction as being a positive component and compassion fatigue as a negative component, in terms of the possible effects on individuals. Compassion fatigue is thought to consist of two constructs: burnout and secondary traumatic stress (a construct related to fear and traumatic experiences in the workplace), with compassion satisfaction being a measure of the pleasure one receives from one's work. Professional quality of life is a complex concept as it involves not only aspects of the work environment and an individual's exposure to primary (experienced by one-self) and secondary trauma (experienced by others) but also the individual's personal attributes.

More recently research by Stamm (2002) and Pearlman and Caringi (2009) has described the positive and transformative aspects of caring. Stamm's original work gave rise to the development of the construct of compassion satisfaction, described as the positive aspects relating to providing care, and Pearlman's research identified the rewards of doing the work (Saakvitne & Pearlman, 1996) and the vicarious transformation that can occur (Pearlman & Caringi, 2009).

Interestingly, research has shown that it is possible to be at high risk of compassion fatigue while at the same time experiencing high levels of compassion satisfaction (Severn, Searchfield & Huggard, 2011; Stamm, 2009). Equally, high-risk scores for compassion fatigue can be associated with low scores of compassion satisfaction (Stamm, 2009). This gives rise to a hypothesis that, while associated in some way, levels of compassion fatigue and compassion satisfaction experienced by an individual may be a result of other, possibly unconnected, processes. Stamm's preliminary view was that compassion satisfaction may be a portrayal of an individual's efficacy and may be "happiness with what one can do to make the world in which one lives a reflection of what one thinks it should be" (2002, p. 113).

Despite the above, and an increasing literature that discusses the presence and the impact of compassion fatigue, burnout, and compassion satisfaction in doctors and other health professionals (Najjar, Davis, Beck-Coon & Doebbeling, 2009), only one previous study involving Resident doctors was identified that quantified using a validated measure, the presence of compassion fatigue as well as burnout and compassion satisfaction in doctors (Markwell & Wainer, 2009). The importance of such a study relates to the need to gain an understanding of stressors in this population as years spent as a Resident doctor have been shown to be extremely stressful (Deckard, Meterko, & Field, 1994; Kam, 1998; Riley, 2004). In addition, doctors at this stage of their career may carry significant financial burden associated with large student loans, as well as the demands associated with achieving the developmental milestones of early adulthood, for example, the establishment of relationships with a spouse or partner, and possibly starting a family. This combination of factors may lead to the development of stress and a subsequent burnout experience.

The current study was conducted to further explore the presence of compassion fatigue, burnout, and compassion satisfaction in a group of hospital-based Resident doctors. The study participants were employed by District Health Boards (DHBs). These are the regional health authorities in New Zealand responsible for funding and providing primary, secondary, and tertiary care within their geographic region.

Methods

Sample and Recruitment

All House Surgeons and Registrars (n=1100) employed by four DHBs and working in a variety of training programmes leading to medical specialization, were invited by the researchers to complete the Professional Quality of Life scale (ProQOL, version 3) (Stamm, 2005).

Measures

The ProQOL (version 3) is a 30 item pencil and paper questionnaire with established subscales that measure compassion fatigue, burnout and compassion satisfaction. Each of the three discrete subscales is scored using a 6 point Likert scale with response options of 'never', 'rarely', 'a few times', 'somewhat often', 'often', and 'very often'. Internal consistency (Cronbach alpha) for each of the three sub-scales has previously been reported as follows: compassion fatigue, 0.80; burnout, 0.72; compassion satisfaction, 0.87 (Stamm, 2005). High scores indicate that the participant may be at risk from the effects of compassion fatigue and burnout. Similarly, low scores on the compassion satisfaction subscale may be of concern.

Procedure

The study was approved by the University of Auckland Human Participants Ethics Committee. Prior to distribution, the questionnaire and data gathering process were tested, using doctors who would not be participating in the main study, in order to assess the time required to complete the survey and to obtain feedback relating to the questionnaire design.

The invitation to complete the anonymous questionnaire was distributed to all potential respondents (n = 1100) on two occasions two weeks apart, with the instruction on the second occasion that only those who had not completed the questionnaire previously should now do so. Questionnaires were returned in pre-paid envelopes to a research associate and the data were entered into a Statistical Package for Social Sciences (SPSS) version 14 file.

Demographic characteristics of those who responded to the survey with respect to age, ethnicity, and gender were found to be broadly similar to the characteristics of the total population from which these doctors were drawn. This similarity was determined by comparing these demographic characteristics in the participating group with the same characteristics of the total potential participants from data was supplied by the human resources units responsible for this staff group.

Data Analysis

Data were analyzed using SPSS. In order to establish construct validity of the measures, the suitability of data for factor analysis was assessed by examining the results obtained from Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Results for Bartlett's Test should be significant at the $p < 0.05$ level. Results for the KMO test range from 0 to 1, with 0.6 considered as a minimum value for a good factor analysis (Pallant, 2007). Results for the ProQOL were: Bartlett's $p = 0.0001$, and KMO = 0.874.

Principal Component Analysis was used to extract the data so as to identify patterns in relation to each instrument and to reduce the number of variables into single factors. The analysis resulted in several factors emerging for both instruments, each with an eigenvalue of greater than 1. Varimax, with Kaiser Normalisation, was then used as the rotation method. Factor loadings of 0.40 or higher were considered evidence that instrument items were importantly correlated with a common factor (Pallant, 2007). Factor analysis resulted in the identification of subscales for each of the main instruments. The internal consistency of each total and subscale measure was assessed using Cronbach's alpha, with scores of 0.70 or higher indicating evidence of acceptable internal consistency (Pallant, 2007). Values of Cronbach's alpha for the total instrument and the various subscales were all greater than 0.72 (Table 1).

Table 1. Internal Consistency of Instruments

Instrument	Number of Items	Published Cronbach's alpha	Survey Sample Cronbach's alpha
ProQOL			
Compassion Fatigue	10	0.80	0.83
Burnout	10	0.72	0.70
Compassion Satisfaction	10	0.87	0.82

Results

Participants

Two hundred and fifty three completed questionnaires were returned representing an overall response rate of 23%. The response rate across District Health Boards (DHB) ranged from 16.7% to 25.6%. One hundred and forty nine (58.9%) of the respondents were female. Their mean age was 31.1 years (standard deviation [SD] 5.9) and the mean time since completing their undergraduate medical school training was 6.5 years (SD 5.4). The majority of survey participants identified as New Zealand/European ethnicity (52%) with the next most commonly reported ethnicities being Chinese (11%), Maori (5%), and Indian (5%). The majority (79%) trained at a New Zealand medical school.

Table 2. Comparison of Normative and Obtained Survey Means of ProQOL (Compassion Fatigue, Burnout, and Compassion Satisfaction Subscale Scores)

Dependent Variable	*N*	Normative Mean (SD)*		Survey Mean (SD)		Percentage scoring below 25th percentile	Percentage scoring above 75th percentile
ProQOL							
Compassion fatigue	230	13.0 (6.0)		12.9 (6.9)			
Burnout	226	23.3 (6.0)		24.4 (6.5)			
Compassion Satisfaction	222	37.0 (7.0)		29.2 (7.1)			
Percentiles		25	75	25	75		
Compassion fatigue		8	17	10	19	12.5	17.1
Burnout		17	28	20	29	24.3	19.5
Compassion Satisfaction		32	41	27	34	25.0	19.8

Note. Valid sample number differs in each case due to inconsistencies in completing the questionnaires by some of the participants.
*Normative data as reported by Stamm (2005)

ProQOL

Results for compassion fatigue and burnout were similar to those previously published, and the result for compassion satisfaction was lower (Stamm 2005). Results indicated that 17.1 percent of the participants have compassion fatigue scores and 19.5 percent have burnout scores above the 75th percentile, and 25 percent have compassion satisfaction scores below the 25th percentile (Table 2).

Associations between demographic variables and compassion fatigue, burnout, and compassion satisfaction

Testing for associations between the dependent variables of compassion fatigue, burnout, and compassion satisfaction; demographic variables of gender, age, and ethnicity; and contextual variables of the number of years since graduation, medical school attended, District Health Board (DHB) employer, and the hospital worked at, were carried out using multiple analysis of variance (MANOVA). Two separate MANOVAs were performed. With each MANOVA, preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrixes, and multilinearity, with no serious violations noted.

The first MANOVA investigated demographic variables in relation to the dependent variables of compassion fatigue, burnout, and compassion satisfaction. The independent variables were gender, age, and ethnicity. Inspection of the data revealed a number of categories containing small numbers. Data for these categories were banded into larger groups, and those categories already with larger numbers remained un-banded. Data for age were banded into two categories, 30 years and under, and 31 years and over, and ethnicity was banded into New Zealand/European and Others. No main effects were detected for any of the variables and none of the interactions was significant ($p <= .05$). However, two results were close to achieving statistical significance: gender*ethnicity, F (3, 185) = 2.36, p = .07; and ethnicity*age F (3, 185) = 2.48, p = .06.

The second MANOVA investigated contextual variables in relation to the dependent variables of compassion fatigue, burnout, and compassion satisfaction. The independent variables were the number of years since graduation, medical school attended, District Health Board (DHB) employer, and the hospital worked at. As with the first MANOVA, inspection of the data revealed a number of categories containing small numbers. The numbers of years since graduation were banded into three categories, up to 4 years, 5 – 9 years, and 10 years and over. The medical school was banded into three categories: Otago University, University of Auckland,

Table 3. MANOVA investigation of contextual variables in relation to the dependent variables of compassion fatigue, burnout, and compassion satisfaction

Contextual Variable	F (6, 298)	p	Wilk's Lambda	Partial eta squared
Medical school attended	2.65	.02	.90	.05
Medical school*Hospital	2.41	.03	.91	.05
Medical school*DHB	4.10	.001	.85	.08

and Others (overseas medical schools). The hospital worked at was banded into three categories. DHB data were not banded. Statistical significance results for this MANOVA are shown in Table 3. One additional result was close to achieving statistical significance: DHB F (6, 298) = 2.00, p = .07.

When the results are considered separately, and using a Bonferroni adjusted alpha level of .017, the two differences that reached statistical significance were both for compassion fatigue. Firstly, for the interaction between medical school attended and the DHB, F (2, 151) = 6.64, p = .002, and partial eta squared = .08. On inspection, the mean scores for medical school attended were Otago (M = 13.06, SD = 7.04), Auckland (M = 13.30, SD = 7.07) and 'Other' (M = 12.07, SD = 6.97). Secondly, for the interaction between medical school attended and hospital worked at, F (2,151) = 4.78, p = .01, and partial eta squared = .06.

For these statistically significant results, a one-way between-groups ANOVA was conducted to explore the impact of hospital worked at on compassion fatigue. Post-hoc comparisons using the Least Squares Difference test failed to reveal any significant difference between the hospitals.

A second ANOVA was conducted to explore the impact of DHB employer on compassion fatigue. Despite reaching statistical significance, the actual difference in mean scores was quite small. The effect size, calculated using eta squared, was .02. Post-hoc comparisons using the Least Squares Difference test failed to reveal any significant differences.

Discussion

The present study surveyed a group of Resident doctors to determine the levels of compassion fatigue, burnout, and compassion satisfaction in this group. Results indicate that one in six doctors in the study appear to be at risk of experiencing compassion fatigue and one in five at risk of burnout. These findings are similar to those previously reported in comparable studies of other health professionals (Stamm, 2005). Based on a review of over 2000 datasets of health professional's ProQOL scores, Stamm (2005) proposed that scores above the 75th percentile indicated that participants may be at risk for compassion fatigue and burnout. Similarly, scores for compassion satisfaction below the 25th percentile suggest reduced work satisfaction. These results give an indication of the potential of this population experiencing compassion fatigue. With regard to burnout the number of participants achieving high scores was less than those reported in another New Zealand study that examined the level of burnout and the benefits of peer support, in a group of 50 specialist physicians (Bruce, Conaglen & Conaglen, 2005). However, it should be noted that Bruce et al's study used a different measure of burnout and reported that 28% of their participants were at risk of burnout. The reported levels of compassion fatigue and burnout in the current study are of concern, and indicate the need for effective strategies for managing the emotional and psychological demands that result from exposure to the suffering of others.

ProQOL scores for compassion satisfaction – the pleasure one receives from one's work - in the current study were low with many more participants than expected scoring below the 25th quartile as compared to data previously published (Stamm, 2005). This is of concern in that it may indicate significantly reduced capacity on the part of the individual to experience enjoyment, pleasure, and satisfaction from their work, and to feel as though they are making a worthwhile contribution. In addition, reduced satisfaction in one's medical practice has previously been linked to ill health (Leigh, Kravitz, Schembri, Samuels, & Mobley, 2002).

That there was an absence of any main effects for the demographic or contextual variables indicates that, over a large range of clinical specialties, in different locations, and with varying degrees of experience and of support, compassion fatigue is present in these doctors at levels similar to those previously seen in other health professionals (Stamm, 2005).

Limitations

There are some limitations to this study. Firstly, the low response rate of 23 percent means that caution must be applied in interpreting the data and drawing conclusions relating to the Resident doctor population as a whole. However, the demographic characteristics of those who responded to the survey with respect to age, ethnicity, and gender were broadly similar to the characteristics of the total population from which these doctors were drawn. Secondly, the data resulted from a one-off sampling of the Resident doctors, and did not consider the time of the year that sampling was undertaken. Specific workplace events, such as roster changes, working at a new hospital, and additional workload when covering colleagues on vacation, may contribute

to differences in scores for compassion fatigue, burnout, and compassion satisfaction. Multiple sampling that reflect longitudinal effects may enable conclusions to be made about changes over time. Thirdly, no attempt was made to gather information about exposure to potential traumatising material. Due to the nature of medical practice, the potential for such exposure is assumed. Fourthly, there may be a response bias in that those Resident doctors who responded to the survey may have done so due to a personal interest in the topic. Lastly, our study was limited to Resident doctors in one region, and the findings may not generalize to doctors in other regions. Resident doctors in another region may have additional and different support structures and processes available to them, such as peer group support, individualized support and counseling, and differences in workload such as the complexity, volume and hours of work. These differences may in turn have an effect on reducing the potential for compassion fatigue and burnout and enhancing compassion satisfaction.

Conclusion

This study has reported the level of compassion fatigue, burnout, and compassion satisfaction in a group of Resident doctors working across a wide range of medical specialties. These findings have implications for those involved in the mentorship and pastoral care of doctors, the doctors' employers, medical professional associations, and for the doctors themselves. Additionally, these results can be drawn upon by those involved in undergraduate medical education as an indication of the level of distress experienced by doctors in the workplace. Finally this knowledge could be used to support the design and implementation of educational interventions aimed at creating awareness and that address the emotional demands faced in the clinical environment.

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