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Burnout, compassion fatigue, and compassion satisfaction among staff in community-based mental health services

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ABSTRACT

Providing care to individuals with complex mental health needs can be stressful. However, little research has focused on the emotional, cognitive, and physical consequences of providing mental health care. The aim of this study is to assess burnout (BO), compassion fatigue (CF) and compassion satisfaction (CS) among staff at the four community-based mental health services (CMHS) of Verona, Italy. All staff were asked to complete anonymously the Professional Quality of Life Scale, the General Health Questionnaire, and a socio-demographic questionnaire. In total 260 staff participated (a response rate of 84%). Psychiatrists and social workers were the professionals with the highest levels of BO and CF. Workers with psychological distress reported both higher BO and CF scores, and lower levels of CS. A significant increase in the BO and CF scores was also detected for each extra year spent working in a CMHS. A higher level of CF was associated with female and having been experienced one negative life event in the previous year. These findings are useful for health managers and team leaders to identify factors affecting the professional quality of life of mental healthcare staff, and can provide a rationale for detecting staff at risk for developing negative work-related outcomes.

1. Introduction

Providing care and support to people with complex mental health needs and disabilities can be highly stressful (Schulz et al., 1997; Ohaeri, 2003). The impact of working in psychiatric services on staff quality of life has been assessed in terms of burnout (BO), compassion fatigue (CF), and, more positively, in relation to compassion satisfaction (CS). CF has been described as an occupational hazard specific to clinical work related severe emotional distress (Figley, 1995). It is defined as the formal caregiver's reduced capacity of, or interest in, being empathic or "bearing the suffering of clients" (Figley, 1995, 2002a, 2002b). CF is a state of tension and preoccupation defined by intrusive imagery, numbing or avoidance, anxiety, hyper vigilance, re-experiencing, irritability or outbursts of anger (Figley, 1995, 2002b; Wright, 2004). CF is likely to result in problems such as misjudgements, clinical errors, poor treatment planning, all serious issues for effective care (Figley, 2002a; Bride et al., 2007; Adams et al., 2008).

CF and BO differ in some key aspects. BO, which is defined as "a state of physical, emotional, and mental exhaustion caused by long term involvement in emotionally demanding situation" (Pines and Aronson, 1988), is not directly related to the exposure to traumatic material (Adams et al., 2008). The onset of BO is gradual and cumulative, while CF has a faster onset of symptoms and may result from the exposure to a single traumatic event (Figley, 2002a). Staff who care for psychiatric patients are not subject only to negative consequences. CS refers to the satisfaction derived from being able to help other people (Stamm, 2002). Stamm (2002) has suggested that a professional may experience simultaneously CF and CS, though CF increasing may overwhelm the professional's sense of efficacy and prevent him/her from experiencing CS.

Previous studies have indicated variables serving as risk or protective factors for BO, CF, and CS. Some studies suggested that years of professional experience were associated with a lower risk for both CF and BO (Chrestman, 1999; Cunningham, 2003). By comparison, having a personal history of trauma was associated with an increased risk for CF (Pearlman and MacIan, 1995; Cunningham, 2003). Specialized trauma training has been reported to enhance CS and reduce the levels of CF and BO (Sprang et al., 2007). Exposure factors such as long working hours or high percentages of trauma patients have been associated with an increased incidence of CF (Boscarino et al., 2004; Sprang et al., 2007). As for professional role, Sprang et al. (2007) also found that

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psychiatrists had higher levels of CF than their non-medical counterparts. Against this background, we are not aware of any reported research that has examined all these variables among all the different types of mental health staff in community-based mental health services.

The first aim of this study was to investigate professional quality of life (BO, CF and CS) and its relationship with some work-dependent and independent factors among a representative sample of Italian mental health staff. Based on the published literature, the study will specifically test two hypotheses:

(i) Negative and traumatic life events increase the risk of CF and BO.
(ii) Teaching/training events protect from CF and BO.

Going beyond previous research, in the assessment of quality of life, we have also investigated psychological distress (Adams et al., 2008). Although BO, CF, and lack of CS are important issues of concern for the consequences they have on staff wellbeing, the psychological distress of caregiving is an equally important problem. Thus, the second objective of this research was to examine the relationship among BO, CF, CS and psychological distress.

2. Methods

The study was conducted in the Verona Mental Health Department in NE Italy. It involved four psychiatric catchment areas (for about 460,000 inhabitants), each served by a Community-based Mental Health Service (CMHS): North West, Centre, South, and East CMHS. The study analyzed two of the services as a single area as they have their CMHS and the acute inpatient ward based in the same location. These services each take care of about 6000 patients with a wide range of common and severe mental disorders (Tello et al., 2005).

Each catchment area included a 15-bed acute inpatient ward, a community mental health centre (CMHC) that provided day care and rehabilitation, outpatient clinics, scheduled domiciliary visits, a liaison service that provided psychiatric and psychological consultations for other departments of the general hospital, a 24-h accident and emergency department, a 24-h staffed hostel, and sheltered apartments. Mental health workers involved in the clinical activities were psychiatrists, psychiatrists in training, psychologists, social workers, psychiatric nurses, rehabilitation therapists, and healthcare support workers. With the exception of hospital nurses, all staff worked both inside and outside of the hospital. This ensured continuity of care through the different phases of the treatment and across the various components of service provision (Tansella et al., 1998).

All staff in this study were asked to complete anonymously the Professional Quality of Life Scale (ProQOL III), the General Health Questionnaire (GHQ-12), and a socio-demographic questionnaire. The Institutional Ethical Review Board for the Verona MHD reviewed and approved the study protocol.

2.1. Measures

2.1.1. ProQOL III and GHQ-12

This study focused on four conceptual domains: BO, CF, CS, and general psychological distress. The first three domains were measured using the ProQOL III. The Italian version of the instrument has been validated in a study involving 939 subjects where the theoretical three dimensional structures have been confirmed (Palestini et al., 2009). The ProQOL III is composed of 30 items corresponding to three sub-scales: BO Scale, CF Scale, and the CS Scale. Respondents were asked to indicate how often (0=never, 5=very often), during the last 30 days, each item was experienced (Stamm, 2005). General psychological distress was assessed using the 12-item version of the General Health Questionnaire (GHQ-12; Piccinelli et al., 1993; Goldberg et al., 1997). This scale, based on a 4-point Likert-type scale, is a screening instrument for psychological problems in a general population and has excellent validity and reliability (Piccinelli et al., 1993). Its total score ranges from 0 to 12 and if higher than three (cut-off score), this indicates that clinically significant psychological distress is probably present.

2.1.2. Socio-demographic and occupational characteristics

The socio-demographic characteristics included were gender, marital status, living situation, and educational level. The variables measuring occupational characteristics were occupational status, graduate studies (whether the worker was a postgraduate (Masters, PhD or Specialization)), type of contract, full time or part time job, previous occupation in other health services, receipt of teaching and training events in the last 2 years, and number of years spent working in the Mental Health Department.

2.1.3. Stress exposures

We also included two variables measuring exposure to stressful events. First, the survey asked about eight negative life events (e.g., getting divorced, having problems at work) that could have occurred in the past 12 months (Freedy et al., 1993). Second, we asked about eight lifetime traumatic events (e.g., having been attacked with a weapon). The two stressor variables were coded into three categories (none, 1 event, and >1 event) in order to assess the cumulative effect of these events.

2.2. Statistical analysis

Descriptive analyses and multivariate analysis were performed with the STATA software 10.0 (StataCorp. 2007. *Stata Statistical Software*: *Release 10*. College Station, TX: StataCorp LP). The first objective of the study was evaluated by descriptive and multivariate analyses. Descriptive analyses included the observed frequencies calculation with the respective percentages for each collected variable. Observed frequencies, percentages, mean values (with 95% confidence intervals), median values and percentages above the pre-established threshold scores for CS, BO and CF were estimated for each individual variable. The threshold values were 32.0 for CS, 28.0 for BO and 17.0 for CF. These cutoff values were based on the scores corresponding to the lowest quartile for CS and the highest quartile for BO and CF as reported in the ProQOL Manual (Stamm, 2005). That is, a score of 32.0 or below on the CS scale might predict job dissatisfaction, while scores above 28.0 on the BO scale might suggest negative feelings about one's effectiveness in one's position. Regarding the CF scale, scores above 17.0 might suggest the presence of a potential problem in this domain (Stamm, 2005). A mean comparison among categories of each individual variable was performed for CS, BO and CF using Student's t test (for binomial variables) and ANOVA (for multinomial variables). As far as the GHQ-12 score is concerned, in our analyses it was used as a dichotomized measure (i.e., yes/no) where presence or absence of psychological distress was to be examined (cut-off score: equal or higher than three).

Multivariate analysis included two linear regression analyses using as outcome variables CS and BO, and a Poisson regression analysis for CF as outcome variable. The Poisson regression analysis was chosen because the CF score, differently from CS and BO, was not normally distributed and the distribution was skewed to the right. The interpretation of Poisson regression was presented in terms of incidence rate ratios (IRR).

Since the second objective of this research was to examine the relationship among BO, CF, CS and psychological distress, the correlation among these four domains was calculated.

3. Results

The total number of staff in the four psychiatric services was 311. Overall, 260 professional returned completed questionnaires, a completion rate of 84%.

Since one focus of our study was to assess factors related to professional quality of life, we examined the association between BO, CF and CS and the socio-demographic, occupational and stressor variables in detail (Table 1). Beginning with CS, only the variable psychological distress was related to this outcome: distressed workers had a mean value of CS significantly lower than the non-distressed ones (p-value of t test <0.0001).

As for BO, significant differences appeared in lifetime traumatic events, distress, and graduate studies. More specifically, workers experiencing more than one lifetime traumatic event showed a higher score in BO compared with workers without this history of trauma (p-value of t test$=0.004$), as well as distressed people compared with non-distressed ones (p-value of t test <0.0001). Moreover, staff with a postgraduate (Masters, PhD or Specialization) scored higher in the BO scale when compared with workers without these degrees (p-value of t test$=0.009$). Finally, even if not statistically significant, looking at the means values and percentages above cut-off, psychiatrists and social workers seemed to experience BO more than other workers.

The last part of Table 1 (column 3) refers to CF. The present outcome was significantly associated with the presence of negative life events, lifetime traumatic events, and distress: each of

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Table 1
Profile of Verona Mental Health Department Staff.

	Compassion satisfaction (*N*=250)				**Burnout (*N*=250)**				**Compassion fatigue (*N*=245)**			
	N (%)	Mean (95% CI)	Test value* (*p*-Value)	% Below Cut-off	*N* (%)	Mean (95% CI)	Test value* (*p*-Value)	% Above Cut-off	*N* (%)	Mean (95% CI)	Test value* (*p*-Value)	% Above Cut-off
Gender (missing=1)												
Male	83 (33.3)	32.6 (31.1–34.2)	1.23 (0.218)	50.6	83 (33.3)	21.1 (20.0–22.1)	0.15 (0.883)	6	82 (33.5)	9.6 (8.3–10.8)	1.52 (0.130)	6.1
Female	166 (66.7)	31.4 (30.3–32.6)		54.2	166 (66.7)	21.2 (20.3–22.1)		8.4	163 (66.5)	10.8 (9.7–11.7)		16
Age (missing=11)												
18–30 yrs	31 (13.0)	33.1 (30.9–35.4)	0.49 (0.688)	54.8	31 (13.0)	21.0 (19.2–22.8)	0.35 (0.787)	9.7	31 (13.2)	6.1 (7.0–11.2)	0.53 (0.662)	6.5
31–40 yrs	67 (28.0)	32.1 (30.4–33.7)		47.8	67 (28.0)	20.6 (19.1–22.1)		8.9	66 (28.1)	10.5 (8.7–12.3)		16.7
41–50 yrs	86 (36.0)	31.6 (29.9–33.2)		53.5	86 (36.0)	21.3 (20.1–22.5)		5.8	84 (35.7)	10.6 (9.4–11.7)		13.1
> 50 yrs	55 (23.0)	31.3 (29.3–33.3)		58.2	55 (23.0)	21.5 (20.2–22.4)		7.3	54 (23.0)	10.3 (8.8–11.7)		11.1
Occupational status (missing=1)												
Psychiatrist	25 (10.0)	32.3 (30.1–34.5)	0.97 (0.446)	56	25 (10.0)	23.4 (21.0–25.9)	1.66 (0.131)	16	25 (10.2)	11.0 (8.7–13.2)	0.25 (0.959)	16
Psychologist	13 (5.2)	35.1 (31.5–38.7)		30.8	13 (5.2)	21.1 (18.4–23.8)		0	13 (5.3)	9.8 (7.0–12.6)		7.7
Social worker	14 (5.6)	30.0 (26.5–33.5)		64.3	14 (5.6)	23.6 (20.9–26.2)		21.4	14 (5.7)	11.3 (7.6–15.0)		28.6
Rehabilitation therapist	13 (5.2)	33.1 (30.1–36.0)		69.2	13 (5.2)	20.8 (18.1–23.6)		0	13 (5.3)	9.8 (6.5–13.0)		7.7
Psychiatrist in training	19 (7.7)	33.5 (31.2–35.8)		47.4	19 (7.7)	21.7 (19.5–24.0)		5.3	19 (7.8)	10.6 (7.5–13.7)		15.8
Healthcare support workers	66 (26.5)	31.0 (29.2–32.8)		57.6	66 (26.5)	20.2 (19.0–21.4)		3	65 (26.5)	9.9 (8.5–11.2)		9.2
Marital status (missing=3)												
Single	73 (29.6)	33.1 (31.4–34.8)	1.90 (0.152)	50.7	73 (29.6)	20.3 (18.9–21.7)	1.98 (0.141)	6.9	73 (30.0)	10.0 (8.5–11.4)	0.26 (0.770)	15.1
Married	149(60.3)	31.3 (30.1–32.5)		53	149 (60.3)	21.3 (20.4–22.1)		8.1	145 (59.7)	10.5 (9.6–11.5)		11
Separate, divorced, widowed	25 (10.1)	30.6 (28.1–33.1)		60	25 (10.1)	22.7 (20.7–24.8)		8	25 (10.3)	10.7 (8.6–12.8)		16
Living Situation (missing=6)												
Alone	37 (15.2)	33.1 (30.5–35.7)	1.18 (0.237)	40.5	37 (15.2)	20.8 (18.7–22.8)	0.47 (0.641)	8.1	37 (15.4)	10.2 (8.1–12.3)	0.19 (0.851)	18.9
With partner or family or other	207 (84.8)	31.6 (30.6–32.6)		55.1	207 (84.8)	21.2 (20.5–21.9)		7.2	203 (84.6)	10.4 (9.6–11.2)		23.3
Educational Level (missing=2)												
Primary or secondary school	18 (7.3)	31.2 (27.1–35.2)	1.36 (0.258)	38.9	18 (7.3)	19.7 (17.3–22.2)	1.77 (0.172)	5.6	17 (7.0)	9.5 (7.0–12.0)	0.38 (0.687)	0
Professional qualification/ High school diploma	125 (50.4)	31.2 (29.8–32.5)		56.8	125 (50.4)	20.7 (19.8–21.7)		6.4	122 (50.0)	10.7 (9.6–11.8)		13.11
Univ. diploma or Degree	105 (42.3)	32.7 (31.4–34.0)		51.4	105 (42.3)	21.8 (20.7–22.9)		9.5	105 (43.0)	10.3 (9.2–11.4)		14.3
Graduate studies												
Yes	55 (22.0)	32.6 (31.0–34.1)	0.84 (0.399)	52.7	55 (22.0)	22.8 (21.3–24.3)	**2.65 (0.009)**	9.1	55 (22.4)	10.6 (9.1–12.0)	0.26 (0.794)	12.7
No	195 (78.0)	31.6 (30.6–32.7)		52.8	195 (78.0)	20.7 (19.9–21.4)		7.2	191 (77.6)	10.3 (9.5–11.2)		12.6
Type of contract (missing=9)												
Open-ended contract	184 (76.4)	31.4 (30.3–32.5)	2.80 (0.063)	53.8	184 (76.4)	21.4 (20.6–22.2)	0.84 (0.433)	8.1	180 (76.0)	10.7 (9.8–11.5)	2.64 (0.073)	12.8
Fixed-term contract	28 (11.6)	34.7 (32.4–37.0)		39.3	28 (11.6)	20.8 (18.5–23.0)		7.1	28 (11.8)	11.3 (8.8–13.8)		21.4
Other	29 (12.0)	32.8 (30.3–35.3)		58.6	29 (12.0)	20.1 (18.2–21.9)		3.4	29 (12.2)	8.1 (6.3–9.9)		6.9
Job (missing=2)												
Full time	217 (87.5)	32.0 (31.1–32.9)	0.72 (0.472)	53	217 (87.5)	21.4 (20.7–22.1)	1.85 (0.066)	8.3	213 (87.3)	10.7 (9.9–11.4)	1.78 (0.076)	13.6
Part time	31 (12.5)	31.0 (27.7–34.3)		51.6	31 (12.5)	19.4 (17.6–21.3)		3.2	31 (12.7)	8.6 (6.1–11.1)		6.5
Previous occupation in other health services (missing=4)												
Yes	159 (64.6)	31.6 (30.5–32.7)	1.22 (0.225)	53.5	159 (64.6)	21.0 (20.1–21.9)	0.49 (0.627)	9.4	156 (64.5)	10.1 (9.1–11.0)	1.05 (0.296)	10.9
No	87 (35.4)	32.7 (31.2–34.3)		50.6	87 (35.4)	21.4 (20.3–22.4)		4.6	86 (35.5)	10.9 (9.7–12.1)		15.1
Teaching/training events (missing=6)												
Yes	229 (93.8)	31.8 (30.9–32.7)	1.33 (0.184)	53.3	229 (93.8)	21.3 (20.6–22.0)	0.94 (0.347)	7.9	225 (93.7)	10.5 (9.7–11.2)	0.37 (0.711)	12.4
No	15 (6.2)	34.3 (30.4–38.3)		46.7	15 (6.2)	19.9 (16.9–23.0)		6.7	15 (6.3)	9.9 (6.2–13.5)		20
Negative life events												
None	133 (53.2)	31.5 (30.3–32.7)	1.61 (0.201)	57.1	133 (53.2)	21.1 (20.3–21.9)	1.13 (0.325)	3.8	130 (52.9)	9.3 (8.4–10.1)	**5.68 (0.004)**	7.7

Table 1 (*continued*)

	Compassion satisfaction ($N=250$)				Burnout ($N=250$)				Compassion fatigue ($N=245$)			
	N (%)	Mean (95% CI)	Test value*	% Below Cut-off	*N* (%)	Mean (95% CI)	Test value*	% Above Cut-off	*N* (%)	Mean (95% CI)	Test value*	% Above Cut-off
			(*p*-Value)				(*p*-Value)				(*p*-Value)	
1 event	81 (32.4)	33.0 (31.3–34.7)		45.7	81 (32.4)	20.7 (19.4–22.0)		8.6	81 (32.9)	11.3 (10.0–12.7)		13.6
> 1 event	36 (14.4)	30.7 (28.5–32.9)		52.8	36 (14.4)	22.3 (20.1–24.5)		19.4	35 (14.2)	12.4 (10.0–14.9)		28.6
Lifetime traumatic events												
None	167 (66.8)	31.4 (30.3–32.5)	2.07 (0.128)	56.3	167 (66.8)	20.8 (20.0–21.6)	**5.58 (0.004)**	4.2	163 (66.3)	10.1 (9.2–10.9)	**3.51 (0.031)**	9.8
1 event	61 (24.4)	33.5 (31.8–35.1)		42.6	61 (24.4)	20.7 (19.1–22.2)		9.8	61 (24.8)	10.1 (8.6–11.7)		11.5
> 1 event	22 (8.8)	30.8 (27.4–34.1)		54.5	22 (8.8)	24.8 (22.5–27.1)		27.3	22 (8.9)	13.5 (11.0–16.1)		36.4
Distress (missing=4)												
Yes	79 (32.1)	29.2 (27.6–30.8)	**3.99 (< 0.0001)**	68.4	79 (32.1)	23.3 (22.0–24.5)	**4.36 (< 0.0001)**	15.2	79 (32.6)	13.7 (12.3–15.1)	**6.66 (< 0.0001)**	25.3
No	167 (67.9)	33.1 (32.0–34.2)		44.9	167 (67.9)	20.1 (19.4–20.9)		4.2	163 (67.4)	8.8 (8.0–9.5)		6.1
No. of previous years spent in Mental Health Department (missing=3)												
None	27 (10.9)	34.7 (32.0–37.5)	2.46 (0.056)	40.7	27 (10.9)	18.8 (16.6–21.1)	**2.75 (0.029)**	3.7	26 (10.7)	10.3 (7.0–13.6)	1.24 (0.296)	19.2
1–5 yrs	76 (30.8)	32.8 (31.0–34.5)		43.4	76 (30.8)	20.4 (19.1–21.8)		6.6	76 (31.3)	9.3 (8.0–10.6)		6.6
6–10 yrs	60 (24.3)	30.1 (28.1–32.0)		60	60 (24.3)	21.6 (20.1.–23.0)		11.7	57 (23.4)	10.9 (9.4–12.3)		14
11–20 yrs	60 (24.3)	31.5 (29.9–33.2)		60	60 (24.3)	22.1 (21.0–23.1)		5	60 (24.7)	10.6 (9.2–12.0)		15
> 20 yrs	24 (9.7)	30.9 (27.6–34.1)		62.5	24 (9.7)	23.0 (20.7–25.2)		12.5	24 (9.9)	12.0 (9.8–14.2)		16.7

* A mean comparison among categories of each individual variable was performed for CS, BO and CF using Student's t test (for binomial variables) and ANOVA (for multinomial variables).

these three factors increased the level of CF. Concerning occupational status, once again psychiatrists and social workers were the most fatigued (respectively 16.0% and 28.6% of them scored above cut-off) but, in this case, also being a psychiatrist in training seemed to be related to this outcome (15.8% above cut-off).

Table 2 shows the results of three multivariate analyses using as outcome variables CS, BO, and CF scores (linear regression analyses for CS and BO, the Poisson regression analysis for CF). Distress was a significant covariate in all the regression models: it showed to decrease the CS score of 4.3 points and predicted a 3.1 points increase in the BO score. Yet, being distressed increased the CF score by 57%. Intriguingly, Table 2 also shows that people with a fixed-term contract seemed to be more fulfilled at work compared with workers with an open-ended contract (coefficient = +5.4). Looking at the BO model, a 3.1 point increase was found for separated, divorced or widowed people (compared with singles), and for people who suffered more than one lifetime traumatic event (compared with people without these stressors). A significant increase of 0.1 points in the final BO score was also found for each extra year spent working in the MHD.

In the CF model, being female (vs. male) and having a professional qualification or a high school diploma (vs. primary or secondary school diploma) predicted respectively 11% and 26% increase in the final score. As regarding occupational variables, mental health workers with a fixed-term (vs. open-ended) contract had a higher CF score (IRR = 1.24), while those with a part time (vs. full time) job seemed to be less fatigued (IRR = 0.83). Again, people with a previous occupation in other health services showed a 17% decrease in the CF score, while those who suffered one negative life event in the past 12 months scored higher compared with people not reporting these experiences (IRR = 1.16). A significant increase in the final CF score was also detected for each extra year spent working in the Mental Health Department (IRR = 1.01).

Finally, a Pearson correlation analysis among BO, CF, CS and GHQ-12 scores was conducted. The results showed a positive correlation between BO and CF ($r=0.4797$; p-value < 0.0001), GHQ-12 and CF ($r=0.4463$; p-value < 0.0001), and BO and GHQ-12 ($r=0.3341$; p-value < 0.0001), while a negative correlation was found between CS and BO ($r=-0.4219$; p-value < 0.0001), CS and CF ($r=-0.159$; p-value $=0.009$), and CS and GHQ-12 ($r=-0.2867$; p-value < 0.0001).

4. Discussion

As far as we know this is the first study to investigate these hypotheses by including such a large and representative sample of different types of mental health professional. Also a large set of job-related and independent factors have been included in the models. Another strength of this study is therefore that its generalizability is likely to be reasonably high, as it was conducted on four different routine psychiatric services, and with a response rate of 84%. Some limitations of the study should also be acknowledged. First, the cross-sectional nature of the survey did not allow for the determination of causality. Future research should use a longitudinal study design to disentangle the complex temporal structure that connects each factor to the others during the professional life of mental health team workers. Second, because of the need to limit the variables included in the study, potentially significant variables (e.g., personal coping styles, or caseload) were not included in the survey. Finally, our results might have been affected by a type II error (failure to detect a true difference) due to the small number of sample in certain categories (e.g., psychologists and rehabilitation therapists in the occupational status variable).

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Table 2
Results of three multivariate analyses using compassion satisfaction, burnout and compassion fatigue scores as outcome variables.

	Compassion satisfaction (*N*=225)				**Burnout (*N*=222)**				**Compassion fatigue (*N*=218)**			
	Adj R^2=0.0798				Adj R^2=0.0984				Pseudo R^2*=0.1234			
	Coef.	*p*-Value	[95% CI]		Coef.	*p*-Value	[95% CI]		IRR**	*p*-Value**	[95% CI]***	
Gender												
– Female vs. Male	−0.911	0.391	−3.000	1.177	−0.081	0.92	−1.664	1.503	1.113	**0.031**	1.010	1.226
Marital status												
– Married vs. single	−0.330	0.811	−3.051	2.391	0.868	0.411	−1.207	2.943	1.083	0.197	0.959	1.223
– Separate, divorced, widowed vs. single	−1.891	0.303	−5.500	1.718	3.117	**0.027**	0.366	5.868	1.148	0.089	0.979	1.347
Educational level												
Professional qualification/high school diploma vs. primary or secondary school	−0.698	0.735	−4.763	3.367	0.483	0.762	−2.666	3.633	1.261	**0.029**	1.024	1.553
– Degree vs. primary or secondary school	−0.061	0.98	−4.916	4.795	−0.043	0.982	−3.769	3.683	1.129	0.317	0.890	1.433
Type of contract												
– Fixed-term contract vs. open-ended contract	5.449	**0.017**	0.994	9.904	0.422	0.813	−3.090	3.934	1.241	**0.030**	1.022	1.509
– Other vs. open-ended contract	1.022	0.568	−2.503	4.546	0.662	0.628	−2.026	3.350	0.862	0.09	0.726	1.024
Part time vs. full time contract	−2.417	0.122	−5.485	0.651	−1.765	0.145	−4.142	0.612	0.833	**0.016**	0.718	0.966
No. of previous years spent in Mental Health Department	−0.076	0.228	−0.199	0.048	0.099	**0.040**	0.004	0.193	1.006	**0.035**	1.000	1.012
Previous occupation in other health services (Yes vs. No)	−1.271	0.247	−3.430	0.888	−0.470	0.577	−2.126	1.187	0.835	<**0.0001**	0.757	0.922
Negative life events												
– 1 Event vs. none	1.817	0.100	−0.350	3.984	−0.566	0.494	−2.193	1.062	1.160	**0.003**	1.053	1.277
– >1 Event vs. none	−0.525	0.738	−3.618	2.567	0.133	0.911	−2.212	2.478	1.104	0.146	0.966	1.261
Lifetime traumatic events												
– 1 Event vs. none	1.941	0.093	−0.327	4.209	0.037	0.966	−1.670	1.745	0.983	0.741	0.885	1.090
– >1 Event vs. none	1.041	0.551	−2.396	4.479	3.154	**0.017**	0.565	5.743	1.117	0.120	0.972	1.283
Distress (Yes vs. No)	−4.298	<**0.0001**	−6.423	−2.172	3.104	<**0.0001**	1.488	4.720	1.570	<**0.0001**	1.432	1.722

The models were controlled for service, gender, marital status, living situation, educational level, graduated studies, type of contract, occupational status, job, no. of previous years spent in MHD, previous occupation in other health services, formative events, negative life events, lifetime traumatic events, and distress.

* McFadden's Pseudo R^2, given by the formula $(1-L_1/L_0)$ where L_0 and L_1 are the constant-only and full model log likelihoods respectively (Freese and Scott Long, 2006).

** IRR—Incidence Rate Ratios for the Poisson model, obtained by exponentiating the Poisson regression coefficient. For each nominal variable a reference category was chosen (IRR=1), and the other categories were compared with the reference one. With regard to continuous variables, the estimated rate ratio for the dependent variable is expressed for a one unit increase in the independent one.

*** 95% Conf. [Interval]—Confidence Interval for the rate ratio, given the other predictors are in the model.

In our sample, workers with the highest CF and BO scores above the cut-off were psychiatrists (16% in both scores) and social workers (24% and 29% respectively). These results confirm a previous study on BO conducted in the same Italian area (Lasalvia et al., 2009; Lasalvia and Tansella, 2011; Kumar, 2011). For psychiatrists, taking up the medical responsibility for the care of patients could be a driver to experience negative feelings, while for social workers it could be the effect of the higher caseload in a mental health system that gives great emphasis to social support.

When CS was analyzed with a multivariate model, it was shown that people with a fixed-term contract seemed to be more fulfilled at work compared with staff with an open-ended contract. This conflicts with evidence that in many economically developed countries, the recent economic crisis is increasing insecurity at work that is related to stress and bad health. The multivariate analysis on BO demonstrated that being separated, divorced or widowed (vs. single) increased 3.1 points of the BO score. The same increase in the BO score was found in people who suffered more than one lifetime traumatic event (vs. people who did not experience such events). Finally, in line with previous research (Lasalvia et al., 2009) our study showed that each extra year spent working in the Mental Health Department increased the final BO score by 0.1 points.

As concerning CF, according to other studies (Kassam-Adams, 1999; Sprang et al., 2007) multivariate model results showed that females presented a higher risk in experiencing this negative outcome. A significant increase in the final CF score was also detected for each extra year spent working in the Mental Health Department. This finding seems to be in contrast with those of other studies (Chrestman, 1999; Cunningham, 2003), where years of professional experience were found to decrease levels of CF. Since the methodology, the setting and the categories of staff in these studies vary considerably from those of our research, further investigation is needed to clarify this issue.

Furthermore, in consistence with previous research (Figley, 1995; Pearlman and MacIan, 1995) our results showed that people who suffered one negative life event in the past 12 months reported a higher CF score compared with people who did not experience such events. This finding, along with that found for BO, only partially confirms our first hypothesis. In fact, our study showed that the experience of CF was associated with a minimum amount of negative life events in the previous 12 months, whereas workers with multiple traumatic experiences seemed to be more prone to develop BO. This finding is consistent with previous research suggesting that BO has a cumulative onset (Figley, 2002a). However, future studies investigating this complex issue are recommended.

The second hypothesis was not supported by our results; this is probably due to the fact that we asked whether any teaching/training event was attended by the mental health staff. Future research should assess teaching/training initiatives specifically targeted to deal with these components of staff work experience.

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In this regard, mindfulness meditation (Epstein, 1999; Kabat-Zinn, 2003; Grossman et al., 2004) and reflective writing (Frisina et al., 2004; Harris, 2006) have been assessed as particularly effective methods to cope with these negative professional work experiences.

Unsurprisingly, in the three multivariate analyses psychological distress was significantly associated with CS, BO, and CF. Workers with psychological distress reported both higher scores in the BO and CF measures, and lower levels of CS. This finding adds further evidence to previous research (Adams et al., 2008); however, future studies are warranted to investigate the casual ordering of psychological distress and BO, CF, and CS.

Finally, the last objective of the study was to examine the relationship among BO, CF, CS and psychological distress. The negative correlation found between CF and CS confirms that an increase of CF may overwhelm the professional's sense of efficacy and prevent him/her from experiencing CS (Stamm, 2002). Unsurprisingly, our study showed that CS was negatively correlated with both BO and psychological distress. Moreover, our results demonstrated a positive correlation between CF and BO. Although these two components are conceptually different, in our study they seemed to be strictly linked.

In conclusion, our findings are useful for health managers and team leaders to identify factors adversely affecting the professional quality of life of mental healthcare staff, and can provide a rationale for detecting those at risk for developing these negative work related outcomes.

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