Individual and organizational influences of the professional quality of life of Florida public safety personnel

A comparison of the fields

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Anastasia Miller
Department of Healthcare Policy, Economics and Management, The University of Texas Health Science Center at Tyler, Tyler, Texas, USA, and
Lynn Unruh
Department of Health Management and Informatics, University of Central Florida, Orlando, Florida, USA

Abstract

Purpose – Public safety personnel (law enforcement, firefighters, emergency medical services and dispatchers) face work environments which are high stress. These can lead to burnout, secondary traumatic stress and a reduction of compassion satisfaction. However, very little is known about what individual and work factors influence these negative coping mechanisms in public safety personnel. It is also unknown how perceived organizational and coworker support, debriefing methods, or individual characteristics are associated with the aforementioned coping mechanisms. The differences between these fields are also unknown. The paper aims to discuss these issues.

Design/methodology/approach – A cross-sectional administration of surveys to Florida public safety personnel was done. A total of 1,360 public safety individuals completed the survey. Three regression analyses were carried out, utilizing the three Professional Quality of Life Version 5 subscales as the dependent variables. The Perceived Coworker Support Survey, Survey of Perceived Organizational Support, the Brief Resilience Survey and questions regarding debriefing practices were included.

Findings – Public safety personnel cannot be treated as a singular population for many things. An exception of this was that perceived organizational support and psychological resilience were associated with positive outcomes, albeit, to varying degrees in all fields. The other individual and organizational factors had very distinct impacts on the varying fields.

Research limitations/implications – There are limitations due to the nature of cross-sectional survey design and due to the sample size.

Originality/value – This study displays statistical relationships between factors which public safety agencies could use to increase employee job satisfaction and potentially reduce turnover. It was the only study the authors could find which include dispatchers when comparing these four public safety fields.

Keywords Perceived organizational support, Professional quality of life, First responders

Paper type Research paper

Introduction

This study examines how the structural and organizational response that varies across public safety entities is related to how well public safety personnel respond to traumatic work experiences. It also makes comparison across the four branches of public safety, uncommon in

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the literature. For the purpose of this paper "public safety" will be defined as law enforcement services, fire/rescue services, emergency telecommunicators (aka "dispatchers") and emergency medical services (EMS). It is apparent that although they all serve roles that support public safety they experience it differently. To examine the relationship that plays out between the individual, their job tasks, and the organization and other environmental factors this study examined multiple aspects across the public safety fields.

Although these four professions have different exposures to the public as well as wildly varying workloads, job expectations and exposure to trauma, they do share distinct similarities when to comes to work environment. All four can be placed in the category of "high strain jobs" given that the demands of the job are high and often perceived decision latitude is low among the employees (Stansfeld and Candy, 2006). All four have similar organizational structures, in that paramilitary organizational arrangements are frequently utilized (Archer, 1999; Violanti and Aron, 1994), which creates similarities in how the job stresses impact the employees (Stansfeld and Candy, 2006). There is also a culture of emotional silence which has been documented in law enforcement (Silvestri, 2007), fire (Hall *et al.*, 2007) and EMS (Doyle, 2010) which contributes to similar organizational cultures characterized by limited interpersonal bonding (Violanti and Aron, 1994). This is related to the employment status of the first responder, which may be a confounding factor. There are indications that volunteers are susceptible to the stresses of the job (Folwell and Kauer, 2018) but have different cultural considerations and commitments (Lee and Olshfski, 2002).

Complaints about the public safety work environment that are frequently mentioned in the literature are a lack of organizational resources (Edwards *et al.*, 2008), high pressure (Gershon *et al.*, 2009), lack of organizational support (Avery *et al.*, 2007) or active impediment to job tasks (Tracy and Scott, 2006), and a lack of autonomy (Richardsen *et al.*, 2006). Work environment has been shown to have a relationship to how employees handle traumatic events (Boscarino *et al.*, 2004) and burnout (Bogaert *et al.*, 2013). How a person responds to a psychologically stressful situation depends on personal attributes as well as social environment and organizational environment for helping professionals (Trippany *et al.*, 2004).

This study utilizes constructivist self-development theory (CSDT) as its foundation. CSDT focuses on the influences that a person's developmental, social and cultural contexts have on how they perceive and interact with the world. The theory explains the aspects of the "self" that are affected by traumatic events and how people can have positive feelings of compassion satisfaction (CS), or negative ones of burnout and secondary traumatic stress (STS), when working with traumatized individuals. The theory portrays the individual's response and adaptation to trauma as an interaction between their "personality and personal history and the traumatic event and its context, within the social and cultural contexts for the event and its aftermath" (Saakvitne *et al.*, 1998). CSDT theory proposes that negative symptoms develop in certain professions due to an analogous numbing and avoidance pattern seen in victims of direct trauma when they are unable to completely process traumatic material (McCann and Pearlman, 1990). It was hoped that by identifying corresponding factors an organization (discussed below) can influence the way in which individuals responded to trauma that the study could provide real-world applications. The instruments were chosen because they were all previously used and validated. The chosen instruments as well as the literature supporting their selection and which theoretical construct they address are briefly discussed.

Responses to work stress

Compassion satisfaction

Compassion has been defined in previous academic papers as an "awareness of the suffering of another coupled with the wish to relieve it" (Radey and Figley, 2007). CS is the satisfaction

a person experiences by helping people while working (Stamm, 2002). Professionals who derive satisfaction from being in "compassionate fields" such as through gaining a meaning and purpose in their professional lives (Tyson, 2007) are said to have high "CS" (Stamm, 1999). While public safety is often overlooked, there are fields where CS is expected and which are helpful in preventing STS. For example, law enforcement professionals working with children sexually exploited on the internet stated that while the work disturbed them, they derived a sense of personal meaning through helping the children (Burns *et al.*, 2008). Italian fire and EMS workers also found CS to be a buffering effect to the stressors of the job (Prati *et al.*, 2010).

Burnout

Burnout is a defensive coping behavior in order to deal with the psychological strain and inadequate support that some interpersonal interactions create (Jenkins and Baird, 2002). Burnout is a response to chronic work stress that is comprised of three components: emotional exhaustion, depersonalization and low personal accomplishment (de la Fuente Solana *et al.*, 2013). Burnout has been documented as a significant problem in law enforcement (Schaible and Gecas, 2010), fire (Regehr and Millar, 2007), dispatch (Bevan and Wild, 2007) and EMS (Smith and Roberts, 2003). Previous research suggests that public safety fields are even more susceptible due to shift work (Demerouti *et al.*, 2001) and high job demands (Regehr and Millar, 2007) mixed with low job control (Regehr *et al.*, 2002). It has been found to be significantly related to the organizational factors such as administration, supervision and paperwork (Brief and Weiss, 2002). Both burnout and intent to turnover are significantly related to lack of supervisory support (Kalliath and Beck, 2001). There is a documented inverse relationship between perceived organizational support (including perceived coworker support) and burnout (Baruch-Feldman *et al.*, 2002), so it is important to establish the person's perception of these environmental factors.

Secondary traumatic stress

There is a dearth on the exact prevalence rates of psychologically traumatic symptoms among all four of the public safety professions. Secondary trauma refers to exposure to trauma through secondary sources, such as through the treatment of a patient who has undergone major trauma (Bride, 2004). STS results from either witnessing the traumatic event or assisting in the aftermath (McCann and Pearlman, 1990). It is characterized by two alternating states of numbness and overwhelming feelings, which is very similar to the experiences of those with post-traumatic stress disorder (Saakvitne and Pearlman, 1996, p. 41). It is estimated that 7 percent of professionals who work with traumatized people exhibit signs of STS (Thomas and Wilson, 2004). Perceived organizational support is correlated with lower levels of burnout (Yaghoubi *et al.*, 2014), lower levels of STS (Kulkarni *et al.*, 2013), as well as lower levels of compassion fatigue (Hunsaker *et al.*, 2015). Coworker and supervisory support are associated with lower levels of STS (Galek *et al.*, 2011). It is currently suspected that debriefing activities are also negatively correlated with the negative psychological impact of trauma (Deahl, 2000).

Purpose of the study

Minimal research has been done examining individual and organizational factors associated with the psychological toll of first response work. Even less research has included all four public safety fields. The purpose of this study was to determine the levels of CS, burnout and STS in Florida public safety personnel as well as to determine what individual and

work environment factors were related to them. In order to evaluate, the following research questions were explored:

RQ1. Is there a relationship between demographic characteristics and professional quality of life (ProQOL) among Florida public safety personnel?

RQ2. Is there a relationship between perceived support and ProQOL among Florida public safety personnel?

RQ3. Is there a relationship between psychological resilience and ProQOL among Florida public safety personnel?

RQ4. Is there a relationship between debriefing activities or stress management training and ProQOL among Florida public safety personnel?

RQ5. Are there differences between the public safety fields in the significant factors in all of the above questions?

Methods and data

Sample

The participants include self-reported current public safety employees in the state of Florida. The population of interest for this study was the entirety of the public safety personnel in Florida. This study included volunteer as well as paid public safety personnel. The final convenience sample consisted of 1,360 public safety personnel who responded to the survey. Because of the voluntary nature of the survey participation, and the selection criteria of public safety personnel, this was a self-selected sample among a nonrandom population in the state of Florida.

Methods

To obtain a truly representative sample of public safety personnel who are exposed to possibly traumatic work-related events, it was decided to contact agencies to request they provide the researchers with information for their active public safety personnel. In addition, to garner organizational support and thereby increase response rates, before cold-contacting agencies registered with the state, the professional organizations for public safety officials within the state were contacted first. The two organizations which agreed and wrote a letter of support for the study were the Volunteer Law Enforcement Officer Alliance and The Florida Association of EMS Medical Directors.

Contact information for many state agency personnel is open to the public under the state's Public Records Act. State agencies were contacted and the e-mails for their public safety personnel were requested. Multiple agencies were unable or unwilling to provide the contact information. This most likely contributed to the uneven distribution of participants across the counties responding to the study. A total of 164 counties, cities, unincorporated districts and universities within Florida provided the professional e-mails of their public safety employees.

IRB approval was received prior to contacting current working or volunteering public safety personnel. Between the months of November 2015 and February 2016, participants were sent an initial e-mail requesting their participation. An e-mail was then sent out to their professional e-mail address containing a link to the web-based survey tool through Qualtrics, as well as a brief message with information regarding informed consent and the survey's intention. Approximately two weeks later they received a follow-up e-mail.

The survey included the below previously validated instruments as well as a separate instrument ascertaining access to debriefing after traumatic events, which were devised by the researchers. This included five questions asking if they have the opportunity to debrief

after stressful incidents with colleagues formally or informally in the course of their public safety job. The validated instruments utilized are listed below.

Perceived coworker support. This survey was modified from the original Perceived Organizational Support Survey to incorporate coworkers specifically and has nine items (Ladd and Henry, 2000). It was designed to determine if social support perceptions predict organizational citizenship behavior. Directly it evaluates an individual's perceptions of socio-emotional support coming from coworker (peer) and supervisory support (Sumathi *et al.*, 2015).

Survey of Perceived Organizational Support (SPOS). This study includes the eight-item survey which is a shortened version of the original 36-item SPOS created in 1986 (Eisenberger *et al.*). Cronbach's α coefficient for the original 36-item survey is 0.97, indicating high internal consistency (Eisenberger *et al.*, 1986). The questions for the shorter versions were chosen by selecting the questions which had the highest loading factors from the original 36-item survey (Eisenberger *et al.*, 2002). The SPOS version utilized here is a self-reported response of eight statements utilizing a seven-point Likert scale.

The Brief Resilience Survey (BRS). Although the BRS (Smith *et al.*, 2008) does not factor in all possible resources available nor the personal past history of each individual, it can provide some insight into a psychological process (Herrman *et al.*, 2011) that could be developed among employees to alleviate the stresses of working in traumatic situations (Bartone, 2006). Cronbach's α for the scale has been reported be between 0.70 and 0.95, along with an intraclass correlation coefficient in the 0.62–0.69 range (Windle *et al.*, 2011). There is a psychological construct known as "resilience" that has been used to explain why it appears that professionals working in high stress fields tend to have moderate levels of STS and compassion fatigue, with a very small percentage having "high" ProQOL subscale scores (Lambert and Lawson, 2013). The survey is composed of six items and it utilizes a five-point Likert scale ranging from "strongly disagree" to "strongly agree."

Professional Quality of Life – Version 5. The ProQOL is a self-administered survey composed of three discrete scales with one measuring each of the following constructs: CS, burnout and STS (Stamm, 2010). This 30-item measure has been used to gauge the impact coming into contact with traumatized people of various professions. Previous research utilizing current and previous versions of the ProQOL instrument among law enforcement (Burns *et al.*, 2008) and other first responders (Pietrantoni and Prati, 2008) indicates that there may not be a normal distribution for any of the subscales in these populations.

Data analysis

Prior to analysis the data were screened and cleaned to ensure proper statistical analysis. The participants who stopped answering questions during or immediately after the demographic questions were removed from analysis. After all the appropriate questions were reverse coded, each scale had a score calculated by summing the appropriate variables. These new variables became the representative score variables which were in the analysis.

Before performing descriptive and advanced statistical techniques a number of diagnostic procedures were performed, including Cronbach's αs to estimate internal consistency of the survey and instruments. Cronbach's αs for the ProQOL 5 subscales were all high to moderately high with CS having an α of 0.91, burnout having an α of 0.82 and STS having an α of 0.84. Cronbach's αs of the other validated instruments were also high to moderately high. The SPOS had an α of 0.93. The Survey of Perceived Coworker Support had an α of 0.94. The Brief Resilience Scale had an α of 0.87.

Multiple regression utilizing SPSS 23 was the software utilized. Separate regressions were run, each with a different ProQOL 5 subscale serving as the dependent continuous variable.

A regression was run with each subscale score serving as the dependent variable with the other instruments serving as the independent variables. The demographic questionnaire served as control variables for the regressions.

Results

Demographics

Of the survey participants, 74.9 percent were male and 25.1 percent were female. Close to 29 percent reported frequently performing tasks in a secondary public safety field (Table I). With regard to race/ethnicity 84.9 percent identified as Caucasian. Most the participants identified their primary public safety field as law enforcement (60.7 percent). The majority identified as being employed full-time at their public safety job 97.6 percent. Most the participants had received some form of stress training (72.7 percent). Among the participants, the mean age was 42.12 years. The youngest participant was 19 and the oldest participant was 76. The mean reported years spent working in the current public safety job were 14.77 years. The range for years worked in the current public safety position was 0–50 years. The remainder of the demographic data can be found in Table I.

Compassion satisfaction

As can be seen in Table II, not all of the significant variables were significant for all four public safety fields. Female fire (3.044) and dispatch (2.763) personnel had higher levels of CS compared to their male counterparts, while EMS (−5.487) female personnel had lower levels of CS. Gender was not significant in law enforcement personnel. Hispanic law enforcement (2.398) and fire (3.02) personnel had higher CS than Caucasian personnel. Fire personnel with some college (4.245) as well as those with post-graduate education (8.526) had more CS than those with a high school diploma. Law enforcement personnel who were not sure if their agency had provided stress management training (−2.873) had lower levels of CS than those who had received such training. Dispatchers who frequently performed tasks in other public safety fields (2.758) experienced higher amounts of CS, while cross-training/working did not have a statistical relationship with the other fields. Both perceived organizational and coworker support were positively associated with higher levels of CS in all four fields. Higher levels of psychological resilience were associated with more CS for law enforcement (0.417), fire (0.388) and dispatch (0.252) personnel. Fire personnel who did not participated in informal debriefing (−2.162) as well as those who did not worked in agencies which made mental health workers available (−2.59) had lower levels of CS than those who did (Table III).

Burnout

In law enforcement personnel age (−0.116) is inversely related to burnout, with older personnel having lower levels of burnout; however, those who had more years of work experience (0.062) in their current position had higher levels of burnout. These two variables were only significant for law enforcement. Female law enforcement (−1.399) and fire (−2.901) personnel had lower levels of burnout compared to their male counterparts. Black/African-American law enforcement (−2.073) personnel and Hispanic dispatch personnel (−4.189) had lower levels of burnout than Caucasians. Volunteer firefighters (−13.452) had lower levels of burnout than full-time fire personnel. Dispatchers with post-graduate education (−11.192) had lower levels of burnout than those with high school diploma. Both perceived organizational support and psychological resilience were negatively associated with burnout for all four public safety fields. Higher levels of perceived coworker support was also negatively associated with burnout, but only for law enforcement personnel (−0.097). Fire (3.093) and dispatch (2.581) employees who did not regularly participate in

	All ($n = 1,360$) (% of sample)	LE ($n = 826$) (% of sample)	Fire ($n = 270$) (% of sample)	Dispatch ($n = 186$) (% of sample)	EMS ($n = 77$) (% of sample)
Gender					
Male	74.9	81.4	89.6	24.7	74
Female	25.1	18.6	10.4	75.3	26
Do you frequently perform tasks in another public safety field?					
No	71.2	90.3	15.6	81.7	35.1
Yes	28.8	9.7	84.4	18.3	64.9
If yes, what other field(s) do you frequently perform tasks in?					
LE		–	0.4	9.7	1.3
Fire		0.7	–	2.7	51.9
Dispatch		1.2	1.1	–	6.5
EMS		3	81.1	1.5	–
Fire and EMS		1.5	–	1.6	–
Fire and D		0	–	–	1.3
Fire, EMS and D		11	–	–	–
LE and EMS		–	1.1	0	–
LE and fire		–	–	1.6	1.3
LE, fire and EMS		–	–	0.5	–
Race/Ethnicity					
Caucasian	84.9	85.4	85.9	81.2	85.7
American Indian or Alaska Native	1.2	1.1	2.2	0.5	0
Asian	0.8	1	1.1	0	0
Black/African-American	4.7	4.6	2.2	9.7	2.6
Hispanic/Latino	6.3	6.2	6.7	5.9	7.8
Native Hawaiian or Other Pacific Islander	0.5	0.8	0	0	0
Other	1	0.5	0.7	2.7	2.6
Relationship status					
Cohabitating	4	3.8	3.3	5.9	5.2
Divorced	9.5	9.8	7.4	11.3	9.1
In a relationship	8.8	7.3	11.5	11.3	10.4
Married	67.3	71.4	70.4	47.3	59.7
Single	8.8	6.1	5.9	23.1	13
Widowed	0.9	0.7	1.1	1.1	1.3
Public safety employment status					
Full-time	97.6	97.9	98.1	96.2	96.1
Part-time	1.6	1.1	1.5	3.2	3.9
Volunteer	0.6	0.7	0.4	0.5	0
Highest educational level attained					
High school or Diploma/GED	3.8	3	2.6	9.7	1.3
Associate's Degree or Technical Training	27.6	22.6	40.7	24.7	41.6
Some college	24.3	20.2	24.1	39.8	32.5
Bachelor's Degree	30	34.7	23.3	23.1	19.5
Post-graduate	3.3	4	2.6	0.5	3.9
Graduate degree	10.9	15.3	6.3	2.2	1.3
Received stress training					
Yes	72.7	77.5	63	72.6	55.8
No	23.1	18.6	31.9	23.7	39
Do not know	4.2	3.9	5.2	3.8	5.2

Table I. Demographic characteristics

Model	Law enforcement UB	Law enforcement SE	Fire UB	Fire SE	Dispatch UB	Dispatch SE	EMS UB	EMS SE
Constant	19.073	2.257	16.211	4.119	18.645	4.873	10.243	10.087
Age	0.030	0.031	0.041	0.055	0.001	0.072	0.156	0.145
Female	0.544	0.523	3.044**	1.104	2.763*	1.218	−5.487*	2.436
Race								
Black/AA	1.300	1.005	3.409	2.203	−3.891	2.069	2.267	6.428
Hispanic	2.398**	0.837	3.02*	1.347	3.018	2.15	2.433	3.741
Other	1.992	1.061	−0.998	1.669	4.361	3.267	–	–
Relationship status								
Cohabitating	0.923	1.083	0.586	1.791	−1.995	2.267	1.244	3.958
Divorced	−0.181	0.664	0.983	1.268	1.124	1.712	5.12	3.024
In relationship	−0.329	0.795	−0.43	1.156	2.682	1.919	3.684	3.962
Single	0.517	0.889	2.391	1.476	0.738	1.468	5.814	3.094
Widowed	2.961	2.23	−2.639	3.294	2.859	4.582	6.831	7.249
Employment status								
Part-time	1.402	1.838	−0.118	3.407	1.548	3.265	9.306	6.732
Volunteer	-0.072	2.552	7.2	5.52	9.034	7.329	–	–
Education level								
AD or Technical Training	−0.684	1.21	4.051	2.095	−2.096	1.977	5.134	7.534
Some college	0.010	1.225	4.245*	2.145	−0.394	1.869	4.09	7.63
Bachelor's Degree	−0.627	1.187	4.102	2.138	−1.27	1.982	5.16	7.447
Post-graduate	0.397	1.493	8.526**	2.808	12.002	6.633	4.017	7.899
Graduate degree	0.701	1.251	1.111	2.515	−2.725	3.638	4.982	9.627
Stress management training								
Do not know training	−2.873**	1.024	−0.938	1.564	0.332	3.002	−3.997	4.405
No training	−0.878	0.534	0.153	0.82	−2.39	1.329	−2.737	2.143
Work in other fields	0.382	0.67	−0.896	0.954	2.758	1.271	−0.331	2.084
Years of service	0.018	0.032	0.039	0.057	0.016	0.084	0.068	0.18
SPOS score	0.183***	0.019	0.185***	0.031	0.244***	0.054	0.289**	0.101
PCS score	0.116***	0.033	0.131*	0.057	0.193*	0.079	0.252*	0.116
BRS score	0.417***	0.048	0.388***	0.077	0.251*	0.11	0.062	0.162
Debriefing								
Speak to coworkers	−1.024	0.56	−2.162*	0.882	−2.591	1.439	1.243	2.601
Offer mental health	−0.556	0.874	−2.59*	1.314	−0.492	2.231	1.117	2.986
Formal debriefing	−0.644	0.625	−0.687	1.041	1.125	1.456	−1.218	2.575

Notes: UB, unstandardized β. Law enforcement: $R = 0.606$, $R^2 = 0.367$, adj. $R^2 = 0.344$; fire: $R = 0.702$, $R^2 = 0.492$, adj. $R^2 = 0.432$; dispatch: $R = 0.665$, $R^2 = 0.442$, adj. $R^2 = 0.331$; EMS: $R = 0.761$, $R^2 = 0.579$, adj. $R^2 = 0.335$. *$p \leqslant 0.05$; **$p \leqslant 0.01$; ***$p \leqslant 0.001$

Table II. Compassion satisfaction and moderating factors in Florida public safety personnel

informal debriefing, or speaking with coworkers, displayed higher levels of burnout than those who do. Law enforcement personnel (1.326) who did not work in locations which employed formal debriefing methods, such as critical incident stress debriefing, had higher levels of burnout than those who worked in agencies which did (Table IV).

Secondary traumatic stress

Law enforcement personnel who cohabitate (2.611) with a romantic partner have higher levels of STS than those who are married. Part-time fire (8.141) personnel reported higher levels of STS, while volunteer fire (−14.99) personnel reported lower levels of STS than fire personnel employed full-time. Dispatch personnel with some college (4.089) and

Model	Law enforcement UB	Law enforcement SE	Fire UB	Fire SE	Dispatch UB	Dispatch SE	EMS UB	EMS SE
Constant	47.889	1.953	43.521	3.846	46.807	3.994	44.74	9.325
Age	−0.116***	0.027	−0.052	0.051	−0.11	0.059	−0.11	0.134
Female	−1.399**	0.453	−2.901**	1.031	−1.427	0.998	1.394	2.253
Race								
Black/AA	−2.073*	0.87	−0.927	2.057	0.383	1.695	−2.471	5.942
Hispanic	−1.032	0.725	−2.119	1.258	−4.189*	1.762	−4.476	3.459
Other	−0.329	0.918	0.749	1.558	−1.412	2.677	–	–
Relationship status								
Cohabitating	1.828	0.937	1.431	1.672	1.952	1.858	−6.905	3.659
Divorced	0.284	0.575	−1.333	1.184	2.214	1.403	−0.554	2.796
In relationship	−0.323	0.688	0.154	1.079	−2.172	1.573	−2.211	3.663
Single	−0.615	0.769	1.775	1.378	0.888	1.203	−1.271	2.86
Widowed	0.154	1.93	2.767	3.075	−4.698	3.755	−1.409	6.702
Employment status								
Part-time	−2.018	1.591	−4.662	3.181	−1.793	2.676	−2.978	6.224
Volunteer	−1.171	2.209	−13.452**	5.154	1.905	6.006	–	–
Education level								
AD or Technical Training	0.954	1.047	−0.073	1.956	1.315	1.62	7.824	6.965
Some college	0.326	1.06	0.906	2.003	2.756	1.531	6.401	7.054
Bachelor's degree	0.683	1.027	−0.353	1.996	2.257	1.624	5.905	6.885
Post-graduate	−1.35	1.292	−2.863	2.622	−11.192*	5.436	5.862	7.303
Graduate degree	−1.24	1.083	1.526	2.349	3.293	2.982	8.077	8.9
Stress management training								
Do not know training	0.49	0.887	0.578	1.46	1.836	2.46	0.342	4.072
No training	0.678	0.462	−0.378	0.766	−0.662	1.089	0.846	1.981
Work in other fields	0.51	0.58	0.69	0.891	−0.486	1.042	1.734	1.927
Years of service	0.062*	0.027	0.057	0.053	0.099	0.069	−0.025	0.167
SPOS score	−0.177***	0.017	−0.216***	0.029	−0.245***	0.044	−0.22*	0.094
PCS score	−0.097***	0.028	−0.06	0.053	−0.112	0.065	−0.133	0.107
BRS score	−0.56***	0.041	−0.533***	0.072	−0.442***	0.09	−0.581***	0.15
Debriefing								
Speak to coworkers	0.693	0.485	3.093***	0.823	2.581*	1.179	0.726	2.405
Offer mental health	−0.909	0.756	1.785	1.226	−0.24	1.828	2.579	2.761
Formal debriefing	1.326*	0.541	0.771	0.972	−1.134	1.194	0.235	2.38

Notes: Law enforcement: $R = 0.693$, $R^2 = 0.480$, adj. $R^2 = 0.461$; fire: $R = 0.766$, $R^2 = 0.587$, adj. $R^2 = 0.538$; dispatch: $R = 0.726$, $R^2 = 0.528$, adj. $R^2 = 0.433$; EMS: $R = 0.796$, $R^2 = 0.633$, adj. $R^2 = 0.420$. *$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$

Table III. Burnout and moderating factors in Florida public safety personnel

those with a bachelor's degree (3.946) reported higher levels of STS than those with a high school diploma. EMS personnel who frequently perform tasks in other fields (5.459), such as those cross-trained with fire, reported higher levels of STS than those who worked solely as EMS personnel. Fire personnel who had worked in the field longer (0.177) reported higher levels of STS. Perceived organizational support is negatively associated with STS in law enforcement (−0.066) and fire (−0.177) personnel. Higher psychological resilience was associated with a less STS in personnel in all four fields.

Discussion

This study assessed the levels of CS, burnout and STS among public safety personnel in each field. It is unique in comparing all four public safety fields. A notable finding of this

Model	Law enforcement UB	SE	Fire UB	SE	Dispatch UB	SE	EMS UB	SE
Constant	40.438	2.42	45.694	4.546	39.898	4.535	24.22	10.941
Age	−0.043	0.033	−0.099	0.06	−0.089	0.067	0.243	0.158
Female	−0.274	0.561	0.8	1.218	1.022	1.133	−0.577	2.643
Race								
Black/AA	−1.353	1.079	1.602	2.431	0.723	1.925	−3.582	6.972
Hispanic	1.47	0.898	0.007	1.487	0.096	2.001	−0.862	4.058
Other	0.801	1.138	1.767	1.842	−2.713	3.04		
Relationship status								
Cohabitating	2.611*	1.161	3.697	1.977	1.503	2.11	−6.737	4.293
Divorced	−0.777	0.713	−1.473	1.399	1.841	1.593	3.783	3.28
In relationship	−0.804	0.853	1.083	1.275	−2.574	1.786	0.61	4.297
Single	−0.902	0.953	1.804	1.629	−1.004	1.366	4.528	3.356
Widowed	0.677	2.392	−4.004	3.635	−4.446	4.263	8.781	7.863
Employment status								
Part-time	−1.462	1.971	8.141*	3.76	3.629	3.038	10.826	7.303
Volunteer	0.546	2.738	−14.99*	6.092	−3.175	6.82		
Education level								
AD or Technical Training	−0.739	1.298	1.258	2.312	2.912	1.84	10.987	8.172
Some college	−0.61	1.314	2.17	2.368	4.089*	1.739	10.503	8.277
Bachelor's Degree	−0.941	1.273	−0.428	2.36	3.946*	1.844	11.955	8.078
Post-graduate	−2.797	1.602	0.338	3.099	5.607	6.173	4.749	8.568
Graduate degree	−2.564	1.342	1.173	2.776	6	3.385	13.15	10.442
Stress management training								
Do not know training	0.267	1.099	1.571	1.726	1.664	2.793	−6.617	4.778
No training	0.546	0.573	−0.106	0.905	−2.194	1.237	−2.618	2.324
Work in other fields	1.228	0.719	−0.074	1.053	1.105	1.183	5.459*	2.26
Years of service	0.049	0.034	0.177**	0.063	0.106	0.078	−0.181	0.196
SPOS score	−0.066***	0.021	−0.117***	0.035	−0.068	0.05	−0.084	0.11
PCS score	−0.043	0.035	−0.052	0.062	−0.125	0.074	0.06	0.126
BRS score	−0.581***	0.051	−0.814***	0.085	−0.629***	0.102	−0.985***	0.175
Debriefing								
Speak to coworkers	−0.155	0.6	0.621	0.973	1.376	1.339	−0.349	2.821
Offer mental health	0.781	0.937	0.621	1.45	0.714	2.076	1.362	3.239
Formal debriefing	0.506	0.67	−0.133	1.149	−0.25	1.355	2.211	2.793

Notes: Law enforcement: $R = 0.495$, $R^2 = 0.245$, adj. $R^2 = 0.217$; fire: $R = 0.683$, $R^2 = 0.466$, adj. $R^2 = 0.403$; dispatch: $R = 0.630$, $R^2 = 0.397$, adj. $R^2 = 0.276$; EMS: $R = 0.789$, $R^2 = 0.623$, adj. $R^2 = 0.404$. *$p \leqslant 0.05$; **$p \leqslant 0.01$; ***$p \leqslant 0.001$

Table IV.
Secondary traumatic stress and moderating factors in Florida public safety personnel

study was that public safety personnel cannot be treated as a singular population for many things. An exception of this was that perceived organizational support and psychological resilience were associated with positive outcomes, albeit, to varying degrees in all fields. This is not particularly surprising given evidence in the literature showing that perceived organizational support leads to happier and greater well-being in employees (Wilson *et al.*, 2004) along with evidence that employee psychological capital, which includes relicense, is also associate with long-term employee well-being (Avey *et al.*, 2010). Gender had an interesting influence with CS, with females having a positive association in fire and dispatch while it was negative for EMS and no relationship for law enforcement. This is interesting given a previous study which found no gender difference associated with CS (Craig and Sprang, 2010). Both higher perceived organizational and coworker support were associated

with higher levels of CS in all four fields. This is supported by previous studies finding both coworker support (Hinderer *et al.*, 2014) and organizational commitment (Li *et al.*, 2014) were associated with higher CS. Higher levels of psychological resilience were associated with more CS for law enforcement, fire and dispatch personnel, but not EMS. This is particularly enlightening, given a previous study which did not make a distinction between firefighters, paramedics and law enforcement personnel when examining aspects of resilience in first responders finding statistical significance between resilience and CS (Pietrantoni and Prati, 2008).

Debriefing activities was interesting because it influenced CS and burnout, but not STS, the factor it ostensibly would be geared for. It was also interesting that different types (formal vs informal) of debriefing impacted the different public safety fields differently. Fire personnel who participated in informal debriefing as well as those who worked in agencies which made mental health workers available had higher levels of CS than those who did not. Fire and dispatch employees who regularly participated in informal debriefing displayed lower levels of burnout than those who do not. Law enforcement personnel who worked in locations which employed formal debriefing methods had lower levels of burnout than those who worked in agencies which did not. These results may give credence to the literature which indicates that when debriefing activities are voluntary, they are helpful (Deahl, 2000). Both perceived organizational support and psychological resilience were negatively associated with burnout for all four public safety fields, which further expands existing literature for both perceived organizational support (Bobbio *et al.*, 2012) and psychological resilience (Cooke *et al.*, 2013).

Employment status was also interesting because volunteers had lower levels of burnout and lower levels of STS than full-time personnel and part-time personnel reported higher levels of STS, but only in fire personnel. Cross-training, or frequently working in other fields, was another interesting result, because EMS personnel who frequently perform tasks in other fields reported higher levels of STS while dispatchers who frequently performed tasks in other public safety fields experienced higher amounts of CS. Psychological resilience was negatively associated with STS for all four public safety fields. This is to be expected, given that higher levels of psychological resilience should give someone a great ability to "bounce back" from a traumatic event (Smith *et al.*, 2008). Perceived organizational support was associated with lower levels of STS in fire and law enforcement personnel.

Future research is needed to further expand this area. For example, this study should be repeated in additional areas to determine generalizability. It would also be interesting to determine if there are other factors involved which greatly impact the ProQOL of public safety personnel, such as familial support. A study participant also suggested looking at how prior military serve impacted public safety ProQOL, which is a factor we hope to look at in the future.

Limitations

This study had several limitations. As with many surveys, there were issues with the response rates. If the respondents are characteristically different from non-respondents, biases could be introduced. It was assumed that since the majority of the survey was established and validated instruments, there was not a significant problem with the readability or the reliability of the survey. However, due to the culture of silence within public safety, it is possible that participants might not have responded truthfully. There are concerns about generalizability, given that this study only examined personnel in Florida. Also, by utilizing a cross-sectional study design, this study was also inherently limited to reporting a "snapshot" of the situation and unable to comment on trends within the public safety population.

Conclusion

Each of the four fields, law enforcement, fire, dispatch and EMS, has different factors which influence their ProQOL. This is at odds with EMS and fire often being grouped together (Institute of Medicine, 2007) and with dispatchers sometimes being viewed as civilian law enforcement personnel (Sewell and Crew, 1984). As shown above, while there are some similarities, there are also noticeable differences between the public safety fields. This provides some insight to which policies might be appropriate for the different public safety agencies. This information can provide a starting point for when public safety managers are considering policies to improve the quality of life of public safety personnel. Although the exact influence of each policy would vary by field, increasing perceived organizational support and perceived coworkers support would have a positive impact on CS in most public safety personnel. Training or education programs to increase individual psychological resilience could reduce burnout and STS and increase CS in many public safety personnel. In addition, there is some insight into who would be more at risk for developing negative coping mechanisms in the line of work.

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About the authors

Dr Anastasia Miller after working in the field as EMT/Firefighter pursed higher education at the University of New Mexico, Indiana University Purdue University Indianapolis and the University of Central Florida. She is currently Assistant Professor at The University of Texas Health Science Center at Tyler. Her research interests include improving the environmental, behavioral and psychosocial aspects of the daily work environment for public safety personnel. Dr Anastasia Miller is the corresponding author and can be contacted at: Anastasia.Miller@uthct.edu

Dr Lynn Unruh is Professor of Health Services Administration who has been with the Department of Health Management and Informatics at the University of Central Florida for the past 15 years. Prior to working at UCF, and she has more than 25 years of experience in the healthcare field. Her search interests include improving the nursing work environment and the impact of globalization on health.