

The Impact of 911 Telecommunications on Family and Social Interaction

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ABSTRACT

Several studies explore the link between emergency response work and compassion fatigue, burnout, and Post Traumatic Stress Disorder (PTSD). In each study, the connection between the challenging and traumatic nature of the workload and its effect on the responder are explored to explain certain behaviors, or changes. This study covers a different side of the impact of the work of emergency telecommunicators. Focused on the effects of the load brought home by telecommunicators, the study outlines perceived changes family members of telecommunicators notice during their tenure as telecommunicators and dispatchers.

INTRODUCTION

The Impact of 911 Telecommunications on Family and Social Interactions

How does one know that the effort exerted to help someone else was worth it? Speak to any 911 Telecommunicator and they'll be able to describe several situations in which they knew their efforts made a difference. Often over the phone, providing support to a woman assaulted by her husband or giving life-saving CPR instructions to a son resuscitating his dying mother. On the radio, effortlessly, calmly, instantly putting out the "officer needs help" broadcast, coordinating responding units, and aiding the capture of a suspect with a gun. 911 Telecommunicators can perform the roles of counselor to a woman in need, faithful advisor to a man with nowhere to turn, and crime-stopping vigilante, all in a day's work.

Moments like the ones described above can mark high points in one's 911 career. A sense of achievement flows from the inherent satisfaction a 911 professional feels when helping someone in need. Empathy and compassion make this satisfaction—compassion satisfaction—a real thing. There's a dark side to the caregiver role, however. Being compassionate and empathic involves costs in addition to the energy required to provide these caregiving services.^{1,2} During the course of a 911 telecommunicator's career, the weight can get heavy.

The United States Department of Justice published a Criminal Victimization Report in 2018, highlighting that the number of violent crimes has been slowly increasing in the last few years after hitting an all time low in 2010. There were six million violent incidents reported to the police throughout the country in 2018 (BJS, 2019), and behind these reports were 911 telecommunicators, who answered the call, dispatched the police officers, stayed on the line and calmed victims down until help arrived.

In April 2012, Pierce and Lilly published one of the first studies on 911 telecommunicators in the *Journal of Traumatic Stress* titled "Duty-Related Trauma Exposure in 911 Telecommunicators: Considering the Risk for Post-traumatic Stress".³ This study described the occurrence of PTSD symptomatology in telecommunicators. It has been instrumental in showing that dispatchers are at risk for PTSD in a similar way as their police officer and firefighter counterparts. In 2016, the National Emergency Number Association (NENA) started the #ThankYou911 initiative to recognize and bring light to the work 911 telecommunicators do every day. Around the same time Ricardo Martinez, a former dispatcher himself started the #IAM911 movement as a way to aid in the push for the Office of Management and Budget to change 911 telecommunicators from their current classification under "clerical" to the more appropriate "protective" class, the same as police, fire

and EMS. Martinez collects stories of the burden carried by 911 telecommunicators and publishes them in his podcast “Within the Trenches”.

The Cost of Caring

The heaviness of the telecommunicator’s role is notable in the difference between when they first started in the profession, compared to a few years later. New 911 telecommunicators have a strong desire to make a difference in the lives of people who call 911 and believe it’s possible. This altruistic viewpoint is not long-lasting as the realities of everyday emergency requests can take their toll on the telecommunicator.⁴ As the stark reality sets in—that most calls and most broadcasts don’t offer the opportunity to help in an authentic way—emotional fatigue can become a challenge. Further, the satisfaction derived from the enjoyable aspects of the 911 telecommunicator role isn’t enough to lift them back up to the level at which they started. Signs of burnout will most likely begin to appear. The job can begin to seem not as fun or rewarding as it once was. As a new normal emerges, Telecommunicators start counting the days to retirement. This is the slow downward spiral of compassion fatigue and burnout. First coined by Dr. Charles R. Figley in 1995, the term compassion fatigue was used to describe the “cost of caring” felt by mental health professionals in the field of social work. Specifically, compassion fatigue is defined as a state of tension and preoccupation with the victims of trauma by re-experiencing the traumatic events. It is a function of bearing witness to the suffering of others.¹ Something 911 telecommunicators do every day.

Compassion Fatigue, Burnout & PTSD

Several studies explore the link between 911 work and compassion fatigue, burnout, and PTSD. In each study, the connection between the challenging and traumatic nature of the 911 workload and its effect on the telecommunicator at the other end of the line are highlighted and dissected.

Troxel’s 2008 study titled “Indirect Exposure to the Trauma of Others: The Experiences of 911 Telecommunicators”⁵ shows that 14.5% of 911 telecommunicators report feeling the symptoms of compassion fatigue sometimes, often or very often. Respondents reported feeling burnout a few times during the past 30 days, while also reporting only a moderate to low level of overall happiness. The study goes on to say that the biggest impact on telecommunicator burnout may not be 911 callers, but other influences such as shift work, lack of managerial support, and other organizational issues.

911 professionals know this job takes a toll. It can cause gradual changes in the way telecommunicators see the world, think about people, interact with family and friends, and their mood in general. For years now, research specific to the 911 industry has supported these revelations, showing the connection between duty-related trauma and PTSD symptoms,^{3,6,7} the impact of compassion fatigue and emotional labor,^{2,4} and the physical effects of working in the profession.⁸

The Family Connection

Amidst the studies conducted of the 911 telecommunications industry so far, none have explored whether the effects above are felt at home, and to what extent.

OBJECTIVE

This study seeks to understand the perceived changes family members and close acquaintances notice throughout the telecommunicator’s career.

METHODS

The study was conducted in the summer of 2019 via an online survey (see appendix A) that reached a national audience of 911 professionals’ families and friends. The survey was conducted anonymously, and the link was shared through e-mail, social media, and different industry publications. The respondents were asked to provide the number of years in which their family member or friend has been a 911 telecommunicator. Appendix A outlines all survey questions used for this study.

The following questions were explored and answered by the data collected from respondents:

1. Is there a relationship between time on the job and the types of mood changes noticed in the dispatcher?
2. Is there a relationship between time on the job and how often family members notice the dispatcher stressed, does it increase/decrease with time?
3. Is there a correlation between time on the job and Emergency Dispatchers “lashing out” at their family members?
4. Is there a relationship between time on the job and whether family members experience anxiety over the stress brought home from work?
5. Is there a relationship between type of family member and types of mood changes perceived?

RESULTS AND DISCUSSIONS

There were a total of four hundred and ninety-eight (498) responses to the survey; two hundred and three responses (203) from spouses or partners of 911 Telecommunicators, eighty-four (84) responses from children of 911 telecommunicators, sixty-seven (67) responses from parents of 911 Telecommunicators, fifty-five (55) responses from siblings of 911 telecommunicators, and eighty-seven (87) responses from “other” close family members or friends of 911 telecommunicators.

Thirteen (13) respondents stated less than one year, eighty-two (82) reported their friend or family member had been on the job for one to five (1-5) years, one hundred twenty-two (122) reported their friend or family member had been on the job for five to ten (5-10) year, and one hundred ninety-five (195) reported their friend or family member had been on the job for more than fifteen (15) years.

Findings

1. Is there a relationship between time on the job and the types of mood changes noticed in the dispatcher?

Overall, most respondents (96.4%) reported noticing mood changes in their 911 family member. Family-perceived dispatcher mood changes tended to increase with increase in dispatcher’s length of time on the job. The increase is more pronounced among dispatchers who had 10+ years on the job. There was no statistically significant association between Family-perceived dispatcher mood changes and dispatcher’s length of time on the job. However, the findings show a borderline strong association between withdrawal from social activity and length of time on the job. Moodiness, irritability, or anger tended to increase more for dispatchers who had

worked 5+ years (13.4%). Moodiness, irritability, or anger also tended to be more prevalent within each category of time on the job, except for those who had worked 1-5 years, where lack of energy was the main family-perceived change. Family perceived dispatchers who had been on the job for <1 year, to mainly feel overwhelmed (17.6%). (See Table 1 and Fig. 1)

2. Is there a relationship between time on the job and how often family members notice the dispatcher stressed, does it increase/decrease with time?

Overall, a majority of respondents (82.7%) reported noticing their 911 family member coming home stressed after a shift. Although not statistically significant (p=0.071), the frequency of family-noticed dispatcher stress per week increased as the number of years on the job increased. The predominant stress

Family-perceived dispatcher Mood Changes	Total Cases N=1,955 (column%)	Time on the job (years): n (row%, column%)					P-value
		< 1 (N=34; 1.7%)	1-5 (N=315; 16.1%)	5-10 (N=388; 17.3%)	10-15 (N=504; 25.8%)	15+ (N=764; 39.1%)	
Witnessed no Mood changes	70 (3.6)	5 (7.1, 14.7)	13 (18.6, 4.1)	7 (10.0, 1.8)	18 (25.7, 3.6)	27 (38.6, 3.5)	0.063
Lack of Patience	222 (11.4)	2 (0.9, 5.9)	35 (15.8, 1.1)	40 (18.0, 10.3)	60 (27.0, 11.9)	85 (38.3, 11.1)	0.197
Withdrawal from Social Activity	173 (8.8)	2 (1.2, 5.9)	23 (13.3, 7.3)	37 (21.4, 9.5)	49 (28.3, 9.7)	62 (35.8, 8.1)	0.054
Lack of Energy	246 (12.6)	5 (2.0, 14.7)	47 (19.1, 4.9)	44 (17.9, 11.3)	57 (23.2, 11.3)	93 (37.8, 12.2)	0.471
Difficulty falling or staying asleep	254 (13.0)	5 (1.9, 14.7)	39 (15.4, 2.4)	50 (19.7, 12.9)	60 (23.6, 11.9)	100 (39.4, 13.1)	0.433
Lack of concentration or focus	99 (5.1)	2 (2.0, 5.9)	18 (18.2, 5.7)	15 (15.2, 3.9)	25 (25.3, 5.0)	39 (39.1, 9.4)	0.274
Depression or general unhappiness	184 (9.4)	1 (0.5, 2.9)	31 (14.0, 9.8)	32 (17.4, 8.3)	48 (26.1, 9.5)	72 (39.1, 9.4)	0.274
Anxiety and agitation	222 (11.4)	2 (0.9, 5.9)	31 (14.0, 9.8)	37 (16.7, 9.5)	60 (27.0, 11.9)	92 (41.4, 12.0)	0.108
Moodiness, irritability, or anger	262 (13.4)	4 (1.5, 11.8)	40 (15.3, 2.7)	45 (17.2, 11.6)	69 (26.3, 13.7)	104 (39.7, 13.6)	0.434
Feeling overwhelmed	223 (11.4)	6 (2.7, 17.6)	38 (17.0, 2.1)	31 (13.9, 8.0)	58 (26.0, 11.5)	90 (40.4, 11.8)	0.607

Table 1.

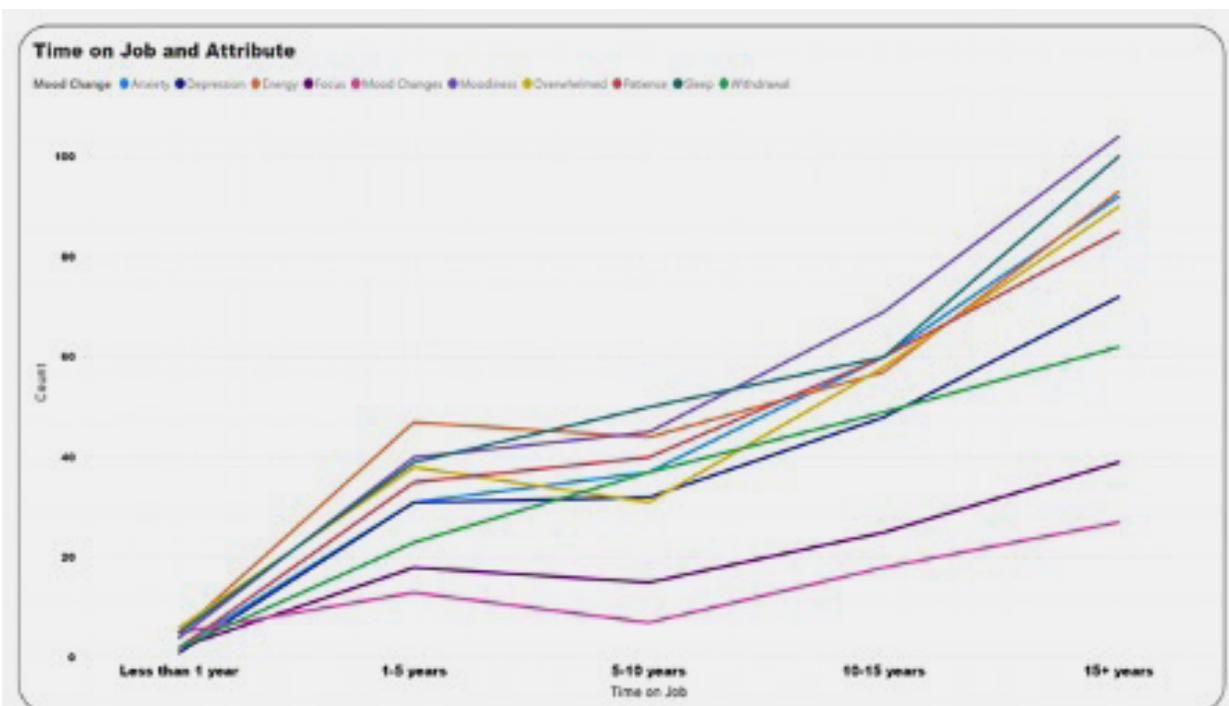


Figure 1. Time on Job and Attribute

Stress Frequency	Total Cases N = 496	Time on the job (years): n (row%, column%)					p*
		< 1 N = 13	1-5 years N = 82	5-10 years N = 84	10-15 years N = 122	15+ N = 195	
1-2 times per week	193 (38.9)	3 (1.5, 23.1)	40 (20.7, 48.8)	31 (16.1,36.9)	42 (21.8,34.4)	77 (39.9,39.5)	0.071
3-4 times per week	151 (30.4)	2 (1.3, 15.4)	20 (13.2, 24.4)	30 (19.9,35.7)	43 (28.5,35.2)	56 (37.1,28.7)	
5 or more times per week	66 (13.3)	1 (1.5, 7.7)	11 (16.7, 13.4)	11 (16.7,13.1)	14 (21.2,11.5)	29 (43.9,14.9)	
My family member does not appear stressed after work	86 (17.3)	7 (8.1, 53.8)	11 (12.8, 13.4)	12 (14.0,14.3)	23 (26.7,18.9)	33 (38.4,16.9)	

frequency/week was 1-2 times (38.9%). This was pretty much the prevalent times per week within each group of time on the job, except for those who had worked <1 year. For a majority (53.8%) of dispatchers who had worked for <1-year, family members tended not to notice they (dispatchers) were stressed (see table 2, figure2).

Table 2.

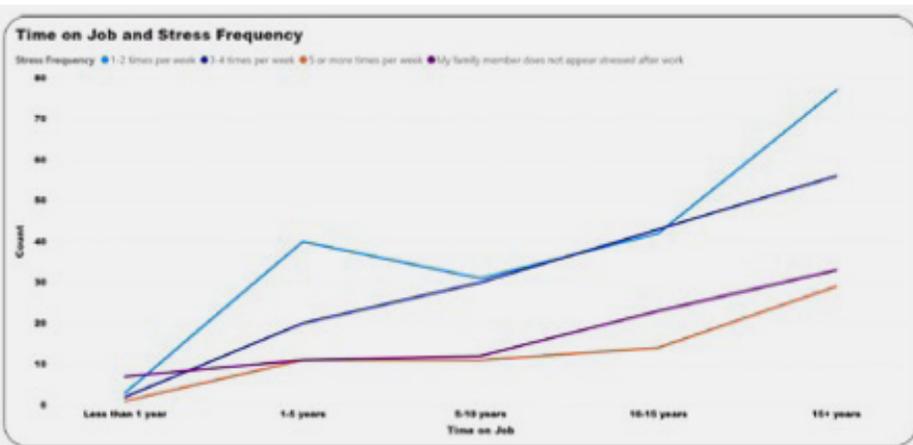


Figure 2. Time on the Job and Stress Frequency

Time on the job (years): n (%)	"Lashing Out"		p*
	Total Cases (N=496) N(column%)	Yes (N=205) n (row%, column%)	
<1	13 (2.6)	4 (30.8, 2.0)	0.908
1-5 years	82 (16.5)	32 (46.3, 15.6)	
5-10 years	84 (16.9)	34 (41.5, 16.6)	
10-15 years	122 (24.6)	52 (42.6, 25.4)	
15+	195 (39.3)	83 (42.6, 40.5)	

Table 3.

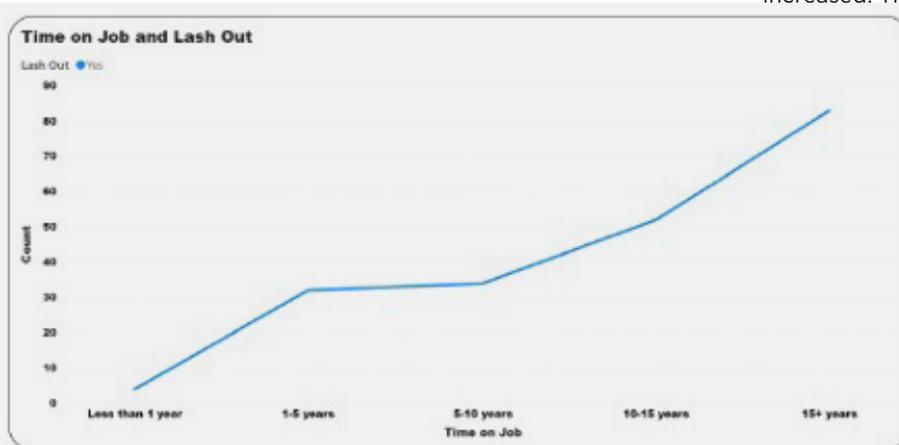


Figure 3. Time on the Job and Lash Out

3. Is there a correlation between time on the job and Emergency Dispatchers "lashing out" at their family members?

Overall, significant number of respondents (41.3%) reported their 911 family member lashing out. Although the probability of a dispatcher lashing out at their family members increased by increase in years on the job, the association between the number of years on the job and lashing out at their family members was not statistically significant. The probability of a dispatcher lashing out stayed almost constant for dispatchers who had 5-10 years on the job, then increased substantially for those who had worked 10+ years (See Table 3, Fig. 3).

4. Is there a relationship between time on the job and whether family members experience anxiety over the stress brought home from work?

Overall, a majority of respondents (71.4%) reported feeling anxious because of the stress brought home by their 911 family member, with 17% feeling anxious "often" or "regularly." Although not statistically significant (p=0.722), the frequency of family members experiencing anxiety over the stress brought home from work increased as the number of years on the job increased. The anxiety experienced was steadily more infrequent, though with increased the number of years on the job as displayed in Table 4 and Figure 4.

5. Is there a relationship between type of family member and types of mood changes perceived?

Finally, all but 4 family-perceived dispatcher mood change types (withdrawal from activity, depression or general, anxiety and agitation, and feeling overwhelmed) were significantly associated (statistically) with the type of family member. Association with a spouse was dominant, followed by a child, sibling and parent. (Table 5, Fig.5)

Family anxiety over stress brought home	Total Cases (n = 496)	Time on the job (years): n (row%, column%)					P*
		< 1 (n=13)	1-5 (n=82)	5-10 (n=84)	10-15 (n=122)	15+ (n=195)	
Never	142 (28.6)	4 (2.8,30.8)	26 (18.3,31.7)	16 (11.3, 19.0)	38 (26.8, 31.1)	58 (40.8, 29.7)	0.722
Infrequently	123 (24.8)	4 (3.3,30.8)	15 (12.2,18.3)	25 (20.3, 29.8)	30 (24.4, 24.6)	49 (39.8, 25.1)	
Occasionally	147 (29.6)	3 (2.0,23.1)	26 (17.7,31.7)	28 (19.0, 33.3)	30 (20.4, 24.6)	60 (40.8, 30.8)	
Often	32 (6.5)	0 (0.0,0.0)	6 (18.8,7.3)	7 (21.9, 8.3)	11 (34.4 ,9.0)	8 (25.0, 4.1)	
Regularly	52 (10.5)	2 (3.8,15.4)	9 (17.3,11.0)	8 (15.4, 9.5)	13 (25.0, 10.7)	20 (38.5, 10.3)	

Table 4.

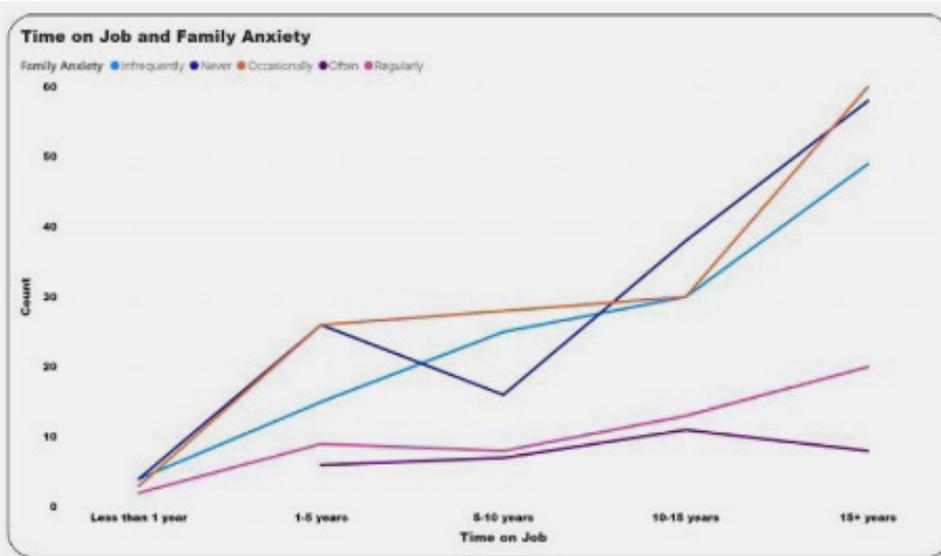


Figure 4. Time on the Job and Family Anxiety

CONCLUSION

Although, in recent years, several studies have been done to explore the link between emergency response work and compassion fatigue, burnout, and PTSD, each study has highlighted a different side of the connection between the challenging and traumatic nature of the workload and its effect on the responder.

This study explored the connection between the stress brought home from work to try and explain certain noticed behaviors, or changes in behaviors. The data collected from close friends and family in this study is significant to show that telecommunicators are bringing stress home in the form of mood changes and social withdrawal, and the stress brought home has effects on their family members. Family members and close friends experience anxiety over the stress brought home from work by their family member who works as a 911 Telecommunicator starting at year five (5) of work.

Family-perceived dispatcher Mood Changes	Total Cases N=1,955	Time on the job (years): n (row%, column%)					p*
		Spouse/Partner (n=934)	Child (n=338)	Parent (n=211)	Sibling (n=192)	Other (please specify) (n=280)	
Witnessed no Mood changes	70 (3.6)	13 (18.6, 1.4)	10 (14.3, 3.0)	12 (17.1, 5.7)	14 (20.0, 7.3)	21 (30.0, 7.5)	<0.001
Lack of Patience	222 (11.4)	120 (54.1, 12.8)	37 (16.7, 10.9)	21 (9.5, 10.0)	16 (7.2, 8.3)	28 (12.6, 10.0)	<0.001
Withdrawal from Social Activity	173 (8.8)	82 (47.4, 8.8)	27 (15.6, 8.0)	16 (9.2, 7.6)	19 (11.0, 9.9)	29 (16.8, 10.4)	0.155
Lack of Energy	246 (12.6)	118 (48.0, 12.6)	49 (19.9, 14.5)	26 (10.6, 12.3)	22 (8.9, 11.5)	31 (12.6, 11.1)	<0.001
Difficulty falling or staying asleep	254 (13.0)	125 (49.2, 13.4)	44 (17.3, 13.0)	28 (11.0, 13.3)	24 (9.4, 12.5)	33 (13.0, 11.8)	<0.001
Lack of concentration or focus	99 (5.1)	50 (50.5, 5.4)	22 (22.2, 6.5)	4 (4.0, 1.9)	9 (9.1, 4.7)	14 (14.1, 5.0)	0.00645
Depression or general unhappiness	184 (9.4)	89 (48.4, 9.5)	30 (16.3, 8.9)	22 (12.0, 10.4)	19 (10.3, 9.9)	24 (13.0, 8.6)	0.0889
Anxiety and agitation	222 (11.4)	104 (46.8, 11.1)	35 (15.8, 10.4)	27 (12.2, 12.8)	21 (9.5, 10.9)	35 (15.8, 12.5)	0.2001
Moodiness, irritability, or anger	262 (13.4)	133 (50.8, 14.2)	43 (16.4, 12.7)	28 (10.7, 13.3)	23 (8.8, 12.0)	35 (13.4, 12.5)	5.8E-05
Feeling overwhelmed	223 (11.4)	100 (44.8, 10.7)	41 (18.4, 12.1)	27 (12.1, 12.8)	25 (11.2, 13.0)	30 (13.5, 10.7)	0.1665

Table 5.

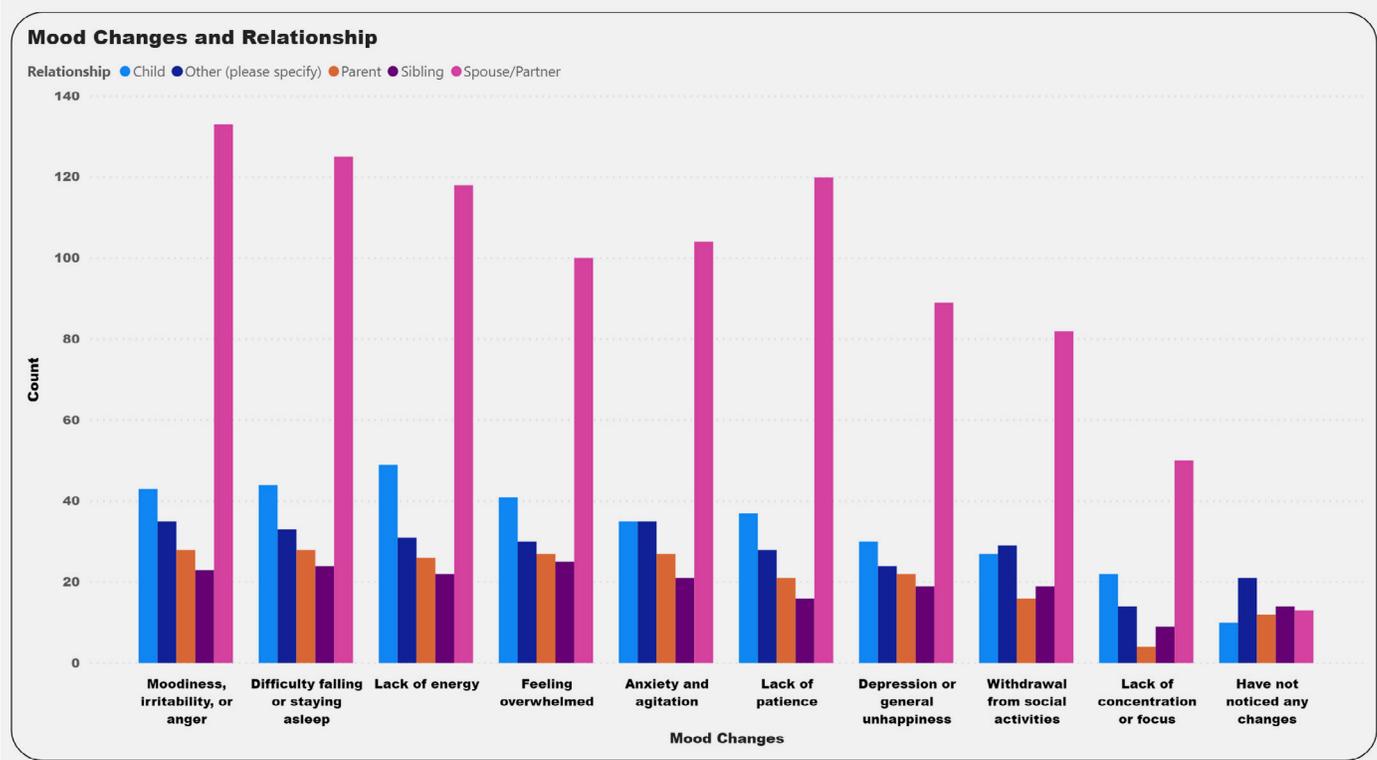


Figure 5. Mood Changes and Relationship

Another significant finding is that family-perceived dispatcher mood changes tended to increase with increase in dispatcher’s length of time on the job. The increase is more pronounced among dispatchers who had 10+ years on the job. The same is true for social withdrawal, as number of years on the job increase so does the reporting of withdrawal from social activity. Finally, one can conclude that several mood changes are noticed by family members and friends of 911 Telecommunicators beginning with year one of service.

Furthermore, figure 2 shows an increase in ‘My family member does not appear stressed after work’ as well as all the other categories at 15+ years. Figure 4 shows a dramatic increase in ‘never’ having family anxiety at 15 years+, as well as most of the categories showing family anxiety. These findings could mean that an increased number of dispatchers and family members who cope well with stress and anxiety at the 15+ year mark, or that family members no longer perceive the effects of the job on the telecommunicator.

The findings in this study build on previous research and applies it to a new area: the family of the emergency dispatcher. Considering the sample size for the dataset, we must also acknowledge that the number of respondents increased as years of service for the subject increased. This could be related to the findings described above. With all these considerations in mind, these authors understand that further research is needed to assess whether other factors such as age, demographics, call volume, communications center size and type (police/fire/ambulance/911 only/combined), etc. could have an impact on the amount of stress brought home and experienced by the families of the telecommunicators.

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APPENDIX A**The Survey**

1. What is your relationship to the 911 Telecommunicator?
 - a. Spouse/Partner
 - b. Child
 - c. Parent
 - d. Sibling
 - e. Other (please specify)
2. How long has your family member been in the 911 Industry?
 - a. Less than 1 year
 - b. 1-5 years
 - c. 5-10 years
 - d. 10-15 years
 - e. 15+ years
3. Please indicate any changes (if any) you've noticed with your family member's mood since they started working as a 911 telecommunicator (check all that apply)
 - a. Have not noticed any changes
 - b. Lack of patience
 - c. Withdrawal from social activities
 - d. Lack of energy
 - e. Difficulty falling or staying asleep
 - f. Lack of concentration or focus
 - g. Depression or general unhappiness
 - h. Anxiety and agitation
 - i. Moodiness, irritability, or anger
 - j. Feeling overwhelmed
 - k. Other (please specify)
4. How frequently does your family member speak with you about their 9-1-1 job and the challenges associated with it?
 - a. Often
 - b. Regularly
 - c. Occasionally
 - d. Infrequently
 - e. Never
5. Do you notice that your family member is stressed after work?
 - a. Yes
 - b. No
6. How often do you notice your family member stressed after work?
 - a. 1-2 times per week
 - b. 3-4 times per week
 - c. 5 or more times per week
 - d. My family member does not appear stressed after work
7. Does your loved one "lash out" at you because they are stressed out from work?
 - a. Yes
 - b. No
8. Have you experienced anxiety or nervousness because of the stress your family member brings home from work?
 - a. Yes
 - b. No
9. How often have you experienced anxiety or nervousness because of the stress your family member brings home from work?
 - a. Often
 - b. Regularly
 - c. Occasionally
 - d. Infrequently
 - e. Never
10. Many spouses/family members have reservations about their loved one beginning a career in law enforcement or the fire service, due to safety concerns. Did you have any concerns about your family member's choice to begin a career in emergency communications? If so, please explain why.
 - a. Yes
 - b. No