

Effect of exposure to violence on the development of burnout syndrome in ambulance staff

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Background/aim: The aim of this study is to determine the condition of ambulance staff (AS) who have been exposed to any kind of violence and to predict risk of development of burnout syndrome.

Materials and methods: Our study was performed with 120 AS working for the Kırıkkale Ambulance Services. During the research, questionnaires collecting descriptive information and the extent of violence to which the AS were exposed were administered; participants were asked to fill out the questionnaire themselves.

Results: It was found that 81 (67.5%) participants had been subjected to at least one type of violence (verbal or physical). Sixty-two percent were exposed to verbal abuse and 55.8% to verbal threats. Rates of physical threats and attacks were higher among male staff ($P = 0.036$, $P = 0.022$), while the rate of personal accomplishment was determined to be significantly lower in males ($P = 0.006$). Emotional exhaustion and depersonalization scores were determined to be significantly higher in those who perceived less support from administrators ($P = 0.014$, $P = 0.032$).

Conclusion: All kinds of negative situations exhaust an individual physically and mentally and lead to the development of burnout syndrome. AS are more prone to these kinds of situations.

Key words: Healthcare workers, violence, burnout syndrome, Maslach Burnout Inventory, job stress, workplace, emergency

1. Introduction

Workplace violence is defined as any incident or situation in which staff members are abused, threatened, or assaulted while they are carrying out their duty (1).

While workplace violence affects practically all sectors and all categories of workers, the health sector carries a major risk: more than half of all workers in this sector may have experienced violent incidents at some point. According to the World Health Organization, violence includes physical assault, homicide, verbal abuse, bullying/mobbing, sexual and racial harassment, and psychological stress (2).

Ambulance staff (AS) and prehospital emergency staff are reported to have the greatest risk. Prehospital AS work in particularly stressful working environments. Ambulance personnel encounter patients in various prehospital situations, some of which can lead to threats and acts of violence toward them. Similar to research findings regarding emergency service personnel, ambulance personnel's high level of exposure to workplace violence is an issue of concern internationally (3,4).

In the most widely used definition, which was put forth by the Maslach Burnout Inventory (MBI), burnout is described as a psychological syndrome of emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA) that can occur among individuals who work with other people in some capacity. EE refers to the depletion of psychic energy or the draining of emotional resources. DP refers to the development of negative, cynical attitudes toward the recipients of one's services. Reduced PA is the tendency to evaluate one's own work with recipients negatively, an evaluation that is often accompanied by feelings of insufficiency (5,6).

Burnout has an important influence on business and social life due to its effects. First, burnout has negative impacts on the psychological and physical health of individuals. Burnout is a putative factor in the development of family discord, drug and alcohol abuse, insomnia, and fatigue. Second, burnout has an effect on job productivity and performance. In general, burnout decreases job performance, job satisfaction, job commitment, and

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quality of service and increases absenteeism, low morale, and job turnover. Therefore, the factors that cause burnout are recognized and then strategies towards prevention of burnout are set in place. A broad range of individuals working in various occupations can experience burnout. Burnout is a prolonged response to chronic job-related stressors. Accordingly, various studies related to burnout have been carried out in different occupations, namely among physicians, nurses, police officers, teachers, librarians, and managers (1,2).

Emergency medical care is a service that can be accessed by calling "112" relative to any emergency in Turkey. This is the telephone number to call from any part of Turkey to receive immediate, skilled medical attention. Ambulance attendants or paramedics transport the patients to the emergency services of the hospitals. There is a limited number of studies that have focused on the prevalence of burnout in AS. The aim of this study was to determine the situation of AS who have been exposed to violence and to assess the burnout level.

2. Materials and methods

Our study was a descriptive and cross-sectional study performed on 120 AS who worked for the Kırıkkale 112 Emergency Services in May 2013. During the research, questionnaires aimed at collecting descriptive information and the extent of violence to which the AS had been exposed were utilized and the participants were asked to fill out the questionnaire themselves. The MBI was used in order to evaluate the level of burnout along with the questionnaires.

The MBI consists of 22 questions. The answers to the questions were designated as never, rarely, sometimes, often, and always. A Likert-type scale was prepared; responses were evaluated between 0 to 4 points, and scores were calculated separately for each scale. Three different scores were calculated: the EE score, the DP score, and the PA score. Minimum–maximum scores were 0–36, 0–20, and 0–32 for EE, DP, and PA, respectively. Higher mean scores for EE and DP subscales and lower mean scores on the PA subscale correspond to a greater degree of burnout (5,6).

With this questionnaire, the burnout situation was assessed in terms of three aspects, namely, EE which displays work overloading; DP, which defines insensitivity and disinterested behaviors of the AS towards the service demanders; and PA, which estimates the success in sufficiency and problem solving. The data were analyzed using SPSS 17 for Windows and the Mann–Whitney U test, the chi-square test, the Kruskal–Wallis test, and correlation tests during the analysis.

3. Results

The percentage of male AS participating in the study was 53.3% (n = 64) and 46.7% (n = 56) of them were female, with an average age of 29.47 ± 6.53 (min–max: 18–46) years. The verified average number of patients per day was 6.78 ± 5.24 . Thirty-nine participants had not been subjected to any type of violence (32.5%) when all types of violence were considered. Eighty-one (67.5%) participants had been subjected to at least one type of violence. Seventy-four (61.7%) of the AS indicated being exposed to verbal harassment, 67 (55.8%) to verbal threats, 31 (25.8%) to physical threats, 24 (20.0%) to physical attacks, and 4 (3.3%) to sexual harassment during their working period. Among the AS, it was observed that the rates of physical threat and physical attack demonstrated a significant difference in terms of sex. Firearms had been used as a tool for physical threat in 9 cases, and puncturing instruments had been used in 22 cases. Self-reported workplace violence exposure of AS according to sociodemographic characteristics is shown in Table 1.

When the characteristics of the individuals who had exposed AS members to violence were considered, 90.8% of them were male and 86.7% of them were patients' relatives. It is found that 61.7% of the AS reported having been exposed to violence during the night shift. Twelve AS (10%) who had been exposed to violence admitted that they had received psychological or legal support after the harassment. No significant difference was determined between the AS's burnout points, the increasing working hours or the number of cases per day at the 112 services, and marital status. When we looked at the state of marital status together with burnout syndrome criteria EE, DP, and PA, there was no significant relationship between them ($P = 0.558, 0.719, \text{ and } 0.710$, respectively). Increasing working hours at the 112 service were compared with EE, DP, and PA values and there was no significant relation between them ($P = 0.252, 0.985, \text{ and } 0.453$, respectively). Similarly, the number of cases per day was compared with EE, DP, and PA values and there was no significant relation between them ($P = 0.178, 0.851, \text{ and } 0.117$, respectively).

The means and standard deviations of the three burnout subscales are demonstrated in Table 2. As seen in Table 2, there is a positive but insignificant relationship between PA and EE and DP ($P = 0.22, P = 0.113$). Table 3 shows the effects of different types of violence on exhaustion criteria.

The EE, DP, and PA rates were determined as $11.69 \pm 6.99, 4.33 \pm 3.09, \text{ and } 7.93 \pm 4.16$ in males and $11.89 \pm 5.09, 4.65 \pm 2.98, \text{ and } 11.01 \pm 4.22$ in females, respectively. The EE and the DP rates were not significantly different with regard to sex, and the PA rate was significantly lower among males ($P = 0.006$).

The EE, DP, and PA rates were $11.45 \pm 0.76, 4.79 \pm 0.38, \text{ and } 6.89 \pm 0.74$ in the age group of 18–29 years; $12.03 \pm$

Table 1. Self-reported workplace violence exposure of AS according to sociodemographic characteristics.

| | Fear of violence | Verbal harassment | Verbal threat | Physical threat | Physical attack | Sexual harassment |
|---------|------------------|-------------------|---------------|-----------------|-----------------|-------------------|
| | % (n) | % (n) | % (n) | % (n) | % (n) | % (n) |
| Sex | | | | | | |
| Male | | | | | | |
| (-) | 34.9 (22) | 32.8 (21) | 33.9 (21) | 65.6 (42) | 71.9 (46) | 95.2 (60) |
| (+) | 65.1 (41) | 67.2 (43) | 66.1 (41) | 34.4 (22) | 28.1 (18) | 4.8 (3) |
| Female | | | | | | |
| (-) | 35.7 (20) | 43.6 (24) | 52.7 (29) | 83.9 (47) | 89.3 (50) | 98.2 (55) |
| (+) | 64.3 (16) | 56.4 (31) | 47.3 (26) | 16.1 (9) | 10.7 (6) | 1.8 (1) |
| P-value | P = 0.540 | P = 0.153 | P = 0.061 | P = 0.036 | P = 0.022 | P = 0.355 |
| Age | | | | | | |
| 18–29 | | | | | | |
| (-) | 29.3 (22) | 39.2 (29) | 50.0 (37)* | 80.0 (60) | 88.0 (66)£ | 97.3 (72) |
| (+) | 70.7 (53) | 60.8 (45) | 50.0 (37) | 20.0 (15) | 12.0 (9) | 2.7 (2) |
| 30–39 | | | | | | |
| (-) | 48.6 (17) | 41.7 (15) | 37.1 (13) | 66.7 (24) | 69.4 (25) | 94.4 (34) |
| (+) | 51.4 (18) | 58.3 (21) | 62.9 (22) | 33.3 (12) | 30.6 (11) | 5.6 (2) |
| 40–49 | | | | | | |
| (-) | 33.3 (3) | 11.1 (1) | 100 (8)* | 55.6 (5) | 55.6 (5)£ | 100 (9) |
| (+) | 66.7 (6) | 88.9 (8) | | 44.4 (4) | 44.4 (4) | |
| P-value | | | * P = 0.018 | | £ P = 0.012 | |

Fisher's exact test.

Table 2. Means and standard deviations of burnout scores.

| Subscales | N | Item | Mean ± std. deviation | Range |
|-------------------------|-----|--------|-----------------------|---------|
| | | number | | |
| Emotional exhaustion | 120 | 9 | 11.594 ± 6.201 | 0–32.00 |
| Depersonalization | 120 | 5 | 4.342 ± 3.013 | 0–13.00 |
| Personal accomplishment | 120 | 8 | 9.162 ± 4.235 | 0–24.00 |

0.84, 3.80 ± 0.43 , and 9.14 ± 0.75 in the age group of 30–39 years; and 12.67 ± 1.87 , 4.67 ± 0.68 , and 9.7 ± 0.54 in the age group over 40 years. The EE and DP rates were not significantly different with regard to age; however, PA was significantly lower in AS 29 years and below than in those 40 years and over ($P = 0.041$).

When the AS were asked about administrative support in cases of exposure to violence, 82 (68.3%) of them answered that the administrative directors were not supportive. We found that 74.4% of those who mentioned inadequate administrative support experienced anxiety and fear of violence, 69.5% had been exposed to verbal

Table 3. The effects of different types of violence on exhaustion criteria.

| | | Emotional exhaustion | | | | Depersonalization | | | | Personal accomplishment | | | |
|--|-------|----------------------|-------|--------------|-------|-------------------|-------|-------------|-------|-------------------------|-------|--------------|-------|
| | | n | % | Mean ± SD | P | n | % | Mean ± SD | P | n | % | Mean ± SD | P |
| Fear of violence | Yes | 77 | 64.7 | 11.78 ± 5.81 | 0.744 | 77 | 64.7 | 4.31 ± 3.02 | 0.629 | 77 | 64.7 | 9.04 ± 4.57 | 0.072 |
| | No | 42 | 35.0 | 11.87 ± 6.86 | | 42 | 35.0 | 4.63 ± 3.13 | | 42 | 35.0 | 10.04 ± 4.26 | |
| | Total | 119 | 100.0 | 11.59 ± 6.20 | | 119 | 100.0 | 4.34 ± 3.01 | | 119 | 100.0 | 9.16 ± 4.23 | |
| Verbal harassment | Yes | 74 | 62.2 | 11.81 ± 6.34 | 0.632 | 74 | 62.2 | 4.54 ± 2.98 | 0.436 | 74 | 62.2 | 8.81 ± 4.17 | 0.047 |
| | No | 45 | 37.8 | 11.81 ± 5.99 | | 45 | 37.8 | 4.23 ± 3.18 | | 45 | 37.8 | 10.37 ± 4.82 | |
| | Total | 119 | 100.0 | 11.59 ± 6.20 | | 119 | 100.0 | 4.34 ± 3.01 | | 119 | 100.0 | 9.16 ± 4.23 | |
| Verbal threat | Yes | 67 | 57.3 | 12.21 ± 6.75 | 0.550 | 67 | 57.3 | 4.37 ± 3.04 | 0.688 | 67 | 57.3 | 8.69 ± 4.11 | 0.033 |
| | No | 50 | 42.7 | 11.27 ± 5.32 | | 50 | 42.7 | 4.50 ± 3.10 | | 50 | 42.7 | 10.37 ± 4.80 | |
| | Total | 117 | 100.0 | 11.59 ± 6.20 | | 117 | 100.0 | 4.34 ± 3.01 | | 117 | 100.0 | 9.16 ± 4.23 | |
| Physical threat | Yes | 31 | 25.8 | 12.41 ± 6.95 | 0.461 | 31 | 25.8 | 4.25 ± 3.22 | 0.429 | 31 | 25.8 | 8.61 ± 4.31 | 0.360 |
| | No | 89 | 74.2 | 11.59 ± 5.90 | | 89 | 74.2 | 4.49 ± 3.00 | | 89 | 74.2 | 9.69 ± 4.52 | |
| | Total | 120 | 100.0 | 11.59 ± 6.20 | | 120 | 100.0 | 4.34 ± 3.01 | | 120 | 100.0 | 9.16 ± 4.23 | |
| Physical attack | Yes | 24 | 20.0 | 14.13 ± 7.03 | 0.045 | 24 | 20.0 | 4.60 ± 3.46 | 0.840 | 24 | 20.0 | 8.43 ± 4.84 | 0.140 |
| | No | 96 | 80.0 | 11.23 ± 5.85 | | 96 | 80.0 | 4.38 ± 2.96 | | 96 | 80.0 | 9.64 ± 4.37 | |
| | Total | 120 | 100.0 | 11.59 ± 6.20 | | 120 | 100.0 | 4.34 ± 3.01 | | 120 | 100.0 | 9.16 ± 4.23 | |
| Sexual harassment | Yes | 4 | 3.4 | 14.00 ± 5.94 | 0.392 | 4 | 3.4 | 6.50 ± 4.43 | 0.323 | 4 | 3.4 | 7.75 ± 3.09 | 0.403 |
| | No | 115 | 96.6 | 11.73 ± 6.20 | | 115 | 96.6 | 4.35 ± 2.95 | | 115 | 96.6 | 9.46 ± 4.51 | |
| | Total | 119 | 100.0 | 11.59 ± 6.20 | | 119 | 100.0 | 4.34 ± 3.01 | | 119 | 100.0 | 9.16 ± 4.23 | |
| Taken legal support after the harassment | Yes | 21 | 21.6 | 13.85 ± 4.65 | 0.039 | 21 | 21.6 | 5.05 ± 2.03 | 0.039 | 21 | 21.6 | 10.7 ± 4.18 | 0.038 |
| | No | 76 | 78.4 | 11.05 ± 6.57 | | 76 | 78.4 | 4.10 ± 3.02 | | 76 | 78.4 | 8.65 ± 4.62 | |
| | Total | 97 | 100.0 | 11.59 ± 6.20 | | 97 | 100.0 | 4.34 ± 3.01 | | 97 | 100.0 | 9.16 ± 4.23 | |

violence, and a statistically significant difference was found in this respect between those who stated administrative support as being inadequate and those who thought otherwise ($P = 0.001$, $P = 0.013$, respectively).

The EE and DP scores of the group that described administrative support as inadequate were significantly higher than those of the group that thought administrative support was adequate ($P = 0.014$, $P = 0.032$, respectively).

4. Discussion

Recently, all types of violence against healthcare professionals have been increasing progressively in Turkey. In particular, emergency service staff and AS working in coordination with healthcare providers are under risk. In professions in which personnel are in close face-to-face contact with service receivers, such as in the healthcare sector, the risk of being exposed to violence is greater (7). This violence can be verbal, physical, or sexual violence and leads to physical or emotional trauma for the personnel. The exposure of healthcare professionals to violence may be inevitable depending on the sociocultural and psychological status of the patients and/or the relatives at every single moment of the encounter. Acts of violence directed towards medical personnel during the course of

duty may lead to a decrease in the quality of service by increasing the level of professional exhaustion. All types of violence, including exposure to violence and/or fear of exposure to violence, may reduce the staff's abilities and self-respect, thereby increasing the level of emotional exhaustion. Violence experienced in the workplace is directly related to the EE, DP, and PA components of burnout syndrome, such as attachment to work, organizational dependency, professional dependency, and professional satisfaction. The MBI score worsens with the increase in EE and DP and decrease in PA, resulting in an increase in the burnout status of the healthcare provider.

Almost half of the 120 personnel from this study were female. There was no statistically significant difference between males and females with regard to fear of violence in the workplace. The rate of physical threats and attacks among males was significantly higher than in females among the AS who participated in the study. The rates of verbal abuse, verbal threats, and sexual attacks were also determined to be higher among males than females. However, no statistical significance was determined. The female AS were found to have been exposed to physical, verbal, or sexual abuse more frequently, leading to burnout syndrome, than the male AS. With respect to sex

differences in relation to violence in the workplace, we are faced with different results in different countries and societies. Different results have been obtained from other studies (8–10). Chappell et al. observed in their study that females had a greater tendency to be exposed to verbal violence and sexual attacks, while, on the other hand, males were more often exposed to threats and physical attacks (11). According to the study by Wieclaw et al., women are exposed to violence at higher rates than men; this study indicated that women were three times more at risk of workplace violence than men (12).

When the levels of exhaustion were evaluated, the EE and DP scores were determined not to be significantly different between males and females, but the PA scores of females were significantly higher than those of the male AS. Low PA scores among males increase the rate of exhaustion. The low rates of exhaustion among females may have been caused by the less severe types of violence, although this may be commented upon differently. In a study conducted in Hong Kong among nurses regarding the prevalence of violence, it was observed that 82% of the nurses who had been exposed to verbal violence had shared their experiences with friends, family, and colleagues and had received their support, and 42% of the nurses had ignored the situation. It was stated that shopping, praying, or dreaming of revenge helped in overcoming the violent incident. From this point of view, we may assume that females share their experiences verbally and emotionally, or that carrying out activities provides them with a sense of relief, such as shopping, more frequently in females than males. For this reason, the female personnel are less affected and recover more easily from the trauma that results in burnout (13).

Verbal abuse was determined to be the most common form of healthcare personnel-directed violence, followed by verbal threats, physical threats, and sexual abuse, respectively. These rates were similar both in males and females. We observed that 67.5% of the AS who had participated in our study were exposed to at least one type of violence. In Mechem's study carried out in the United States, 61% of emergency service staff had been exposed to violent attacks, and in the study conducted by Suserund et al. among paramedics in Sweden, 67% of paramedics had been exposed to threats or physical attacks. In spite of the differences in different countries, we obtained similar results in our study (14–16).

When the effects of the types violence on exhaustion were examined in detail, verbal threats and verbal abuse were found not to affect the EE and DP, but they led to the development of exhaustion syndrome by decreasing PA levels. Levels of exhaustion of those exposed to physical abuse and threats were not different compared to those who had not been exposed, but the EE scores of those exposed

to physical attacks were higher than those of AS who had not been exposed. These results show that healthcare staff who are frequently exposed to verbal threats and abuse feel unsuccessful and worthless, and this situation results in exhaustion syndrome.

When age groups were evaluated, fear of violence was found to be greatest among AS of 18–29 years old. This may be explained by the anxiety of having to start working anew. On the other hand, it may be caused by inexperience or, on the contrary, repetitive exposure to a similar violent event among the older and more experienced staff. Maslach et al. proved in their study that burnout syndrome was observed more commonly among unmarried personnel than in married personnel; the reason for this could be that the personnel in the age groups of 30–39 and 40–49 avoid and ignore the incidents, shut their eyes to physical or verbal abuse directed towards them by the patient/patient's relatives, or develop defensive personal behaviors (5). In our study, we observed that verbal abuse, verbal threats, physical attacks, and physical threats were more common among AS 40–49 years old who had been working for a longer time, although we did not restrict the time period within which paramedics were exposed to violence. A study conducted on the positive effects of family on exhaustion syndrome supports the results of our study (17). When the age groups were assessed according to the MBI, PA values were found to be low in the age group of 18–29, and it could be stated that the burnout situation is more risky at the beginning. The development of exhaustion is more common among younger personnel who start work anew and this could be connected to their ability and enthusiasm for work, thereby consuming more energy within a short period of time. These groups of individuals, who wish to prove themselves at work, believe that they will achieve greater success within short periods of time; however, they become disappointed as they fail to achieve their goals. As a result, they are dragged into disappointment and exhaustion instead of lowering their goals and achieving them. Another reason for the development of exhaustion syndrome in those who start working anew may be due to the confusion in their responsibilities, or it may be that they are yet to develop attachment to the work or workplace (18).

Eighty-two individuals who described administrative support in the workplace as being inadequate had statistically significantly higher EE and DP than those who described the support as adequate. The relationship of the individual with the employer or the director and effective administration in the workplace are directly related to burnout syndrome. Organizations should have consistent and equal regulations for all. Rewards symbolizing materialistic and moral support in the profession or the support of directors in the case of difficult

situations increase the success and feeling of belonging in the workplace, rendering the feeling of exhaustion less common among individuals who feel supported in the workplace (19).

Workload may be defined as the amount of work that should be done in a certain amount of time, at a certain level of quality. 'Workload' defines institutional productivity and the time spent by an individual in performing a certain task. Maslach et al. revealed in their study that low as well as high workloads lead to the development of burnout syndrome. The workload should not be too much, as that would exhaust the individual, but not too little either, so as not to make the individual become bored and feel worthless (5). In our study, it was seen that the workload and/or the patients examined daily did not affect the development of burnout syndrome. This finding could mean that the AS are in harmony in their jobs and enjoys doing their jobs. Maslach et al. revealed in their study that attachment to work, professional experience, and increased level of knowledge were helpful for the individual to overcome the intense tasks and provided positive support toward the building of a career (5).

Those who try to protect themselves without counteracting and continue working without paying attention to the incident after exposure to violence have significantly lower scores of EE and DP than those who initiate legal processes. The PA scores of those who initiated legal processes after a violence episode were found to be significantly higher than those who continued their duties without paying attention to the incident. Legal, medical, and psychological support after exposure to violence will assure that the individual does not feel alone while working, and the feeling that one will be supported medically or legally at any moment will increase the self-esteem of that individual. Thus, these types of support after a violence episode increase the EE and DP scores, and this result is quite surprising, because the long duration usually involved in legal proceedings is accepted as negatively

affecting the healthcare personnel. The PA scores of those who take legal, medical, and psychological support are expectedly higher than those of AS who do not, and this result leads to the belief that support is beneficial for the development and the success of health personnel.

This was a descriptive and cross-sectional study that revealed instantaneous data. Although the study reveals data about people who are working in our city, as long as there are no comprehensive changes regarding system and exposure, we think that the results will sustain their validity. Our study is significant for pioneering more comprehensive studies about exposure to violence and burnout levels.

In conclusion, working conditions are changing with time; increased competition and developing technology cause different effects for each profession. All sorts of negativity in the workplace consume the individual both physically and mentally and lead to symptoms of exhaustion syndrome such as personal inadequacy, lack of attachment to work, and loss of pleasure in life. In particular, healthcare professionals are more prone to these situations. Healthcare will be present as long as the human race is present. Thus, healthcare professionals who are continuously in close contact with patients and relatives should be educated about individual communication and public relations; they should be informed about the risks of the profession, and taught how to protect themselves calmly in the case of violent incidents and how to overcome these type of situations with their professional knowledge and experience. Furthermore, anyone who works as a director at any level of healthcare should ensure that their personnel work in suitable conditions and places according to their professions, teach personnel how to enjoy the work they do, show the qualities expected from every director in any field, and support the personnel. Lastly, the directors or administrators should not subject their personnel to long, boring, and tiring working hours.

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