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Article

Alexithymia, Burnout and Hopelessness in a Large Sample of Healthcare Workers during the Third Wave of COVID-19 in Italy

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Abstract: In the present study, we aimed to assess the prevalence and the relationships between alexithymia, burnout and hopelessness in a large sample of healthcare workers (HCWs) during the third wave of Covid-19 in Italy. Alexithymia was evaluated by the Italian version of the 20-item Toronto Alexithymia Scale (TAS-20), hopelessness was measured using the Beck Hopelessness Scale (BHS) and irritability (IRR), depression (DEP) and anxiety (ANX) were evaluated with the Italian version of Irritability, Depression, Anxiety Scale (IDA). This cross-sectional study recruited a sample of 1445 HCWs from a large urban healthcare facility in Italy from 1 June—31 May 2021. Comparison between individuals positive (n=214, 14.8%) or not for alexithymia (n=1231, 85.2%) controlling for age, gender and working seniority revealed that positive subjects showed higher scores on BHS, MBI, IRR, DEP and ANX than not positive ones ($p<0.001$). In the linear regression model, higher working seniority and higher MBI, DEP, ANX and TAS-20 scores were associated with higher hopelessness. In conclusion, increased hopelessness was associated with higher burnout and alexithymia. Comprehensive strategies should be implemented to support HCWs mental health and mitigate the negative consequences of alexithymia, burnout, and hopelessness.

Keywords: alexithymia; burnout; hopelessness; healthcare workers; HCWs; COVID-19; pandemic

1. Introduction

Alexithymia, burnout, and hopelessness are interconnected issues that might have significantly impacted Healthcare Workers (HCWs) during the Covid-19 pandemic [1]. HCWs, including doctors, nurses, and other frontline staff, have been facing immense physical and emotional challenges while providing care to an overwhelming number of patients. In this context, it is crucial to understand the implications of alexithymia, burnout, and hopelessness on their mental health and overall well-being [2].

The term alexithymia was coined in 1972 by Peter Sifneos, who, based on his clinical experience, realised that many patients had difficulty talking about their emotions, assumed a rigid posture and had problems letting go of their imagination [3]. Initially, alexithymia was identified in people suffering from psychosomatic disorders but was later linked with drug use, eating disorders, antisocial personality and post-traumatic stress disorder [4]. Currently, this clinical condition affects between 7 and 10% of the world's population [5,6]. Although it must be said that alexithymia is not an entirely accepted disorder in scientific circles, its practical value is undeniable. The essential characteristics of alexithymia are mainly difficulty identifying and communicating emotions and feelings, difficulty distinguishing between the physiological activation sentiments accompanying emotional activation, poor symbolising ability expressed through poor or non-existent imagination and a preference to deal with external events rather than focus on internal experiences [7,8]. HCWs experiencing high stress, trauma, and exhaustion levels during the Covid-19 crisis may find it even more challenging to identify and cope with their emotions effectively [9]. The constant exposure to sickness, death, and the pressure to make critical decisions can leave HCWs emotionally overwhelmed, further exacerbating their alexithymia [10].

Burnout, from the English word for "burning out", indicates a specific work situation mainly affecting people engaged in social work. Nurses, psychologists, social workers, doctors (especially those working with chronic or adverse illnesses), teachers, police officers, and judges may experience this emotional exhaustion, leading to decreased professional capacities and severe psychophysical discomfort [11]. Therefore, Burnout syndrome is caused by stress mainly resulting from working in direct contact with people who suffer physically and socially. Burnout syndrome mainly arises in poorly managed structures at the organisational level, where there is a poor distribution of workload, low economic remuneration and high internal conflict. People who tend to develop states of anxiety and who experience critical personal and family situations are at greater risk of burnout.

Burnout has been prevalent among HCWs, particularly during the Covid-19 pandemic [12,13]. The prolonged and intense work demands, including long shifts, higher patient numbers, and the need to constantly adapt to evolving guidelines, have left HCWs at an increased risk of burnout [13]. In the years of the pandemic, doctors, nurses and other health workers have accumulated stress, fear, fatigue, and anxiety, and a great many have turned to the psychological assistance services set up by hospitals and local health authorities: it is estimated that one-fifth of them had at least one contact, perhaps by telephone, with psychiatrists and psychologists. Burnout can magnify the challenges of alexithymia, as individuals may struggle to recognise their emotional state, making it harder to address and seek appropriate support [14].

Hopelessness is a psychological construct underlying several psychiatric disorders and refers to the cognitive schemata underlying negative expectation towards the future [15]. Hopeless' subjects believe that nothing will turn out in their favour, that they will never succeed in life, that their important goals will not be achieved and their problems will never be solved [16]. This definition of hopelessness corresponds to the third component of the negative triad of Aaron T. Beck's cognitive model of depression consisting of: a negative view of the self; a negative view of the present; and a pessimistic view of the future [17]. Hopelessness is a psychological construct that can underlie various psychological disorders and related symptoms such as anxiety, depression, suicide, schizophrenia, and substance abuse [18]. Besides, hopelessness has clinical utility for the assessment and prediction of suicide [19].

Hopelessness can be a distressing consequence of the prolonged stress experienced by HCWs during the pandemic [20,21]. The overwhelming number of critically ill patients, limited resources, and witnessing high mortality rates can create a sense of despair and hopelessness. HCWs may feel powerless, with a lack of control over the situation, and may question the impact of their efforts [22,23]. The combined effects of alexithymia, burnout, and hopelessness can compromise their mental well-being, potentially leading to feelings of depression, anxiety, and even suicidal ideation [24].

In the present study, the Authors aimed to assess the prevalence and the relationships between alexithymia, burnout and hopelessness in a large sample of HCWs during the third wave of Covid-

19 in Italy. Besides, the clinical predictors of hopelessness, as an indirect measure of potential suicide ideation, were evaluated in such sample.

2. Methods

2.1. Study Design and Participants

This cross-sectional study recruited a convenience sample of 1445 HCWs from a large urban healthcare facility in Italy (province of Teramo, Abruzzo region) that provided care to COVID-19 patients during the pandemic. The average age of HCWs was 44.2 ± 12.1 years and the average working seniority was 17.7 ± 12.1 years; females were 1046 (72.4%) and males 399 (27.6%). Recruitment occurred throughout the duration of the study. The self-reported data were collected from 1 June–31 May 2021, which included the peak of the third-wave pandemic that year in Italy. HCWs were invited through work email to participate voluntarily without exclusion criteria. The project was directly endorsed by ASL Teramo to evaluate HCWs well-being during the pandemic, and therefore no IRB approval was required. Participants provided their consent online before completing the survey.

The online questionnaire was composed of three sections. The first section showed in detail the steps and aims of the study and ended with a question asking the respondents whether they agreed to participate. The second section included questions about participants' age (years), sex (male or female), and working seniority.

The third section included six rating scales.

2.2. Assessment

Alexithymia was evaluated by the Italian version of the 20-items Toronto Alexithymia Scale (TAS-20) [25]. A score of 61 or higher was considered indicative of alexithymia. The TAS-20 total score was 46.0 ± 12.9 ; 15.2% ($n=219$) of 1445 HCWs who scored 61 or more were considered positive for alexithymia. The mean TAS-20 total score was 51.1 ± 11.5 , and 32% ($n=214$) of 103 patients scored 61 or more and therefore, were categorised as positive for alexithymia. This study showed that TAS-20 had good reliability (Cronbach's alpha 0.86).

Patient's hopelessness status was measured using the Beck Hopelessness Scale (BHS) [26]. Higher scores on the BHS scale, which ranges from 0 to 20, indicate greater hopelessness. This study showed that BHS had good reliability (Cronbach's alpha 0.93).

The Italian version of the Maslach Burnout Inventory (MBI) was used to evaluate the presence of burnout, with higher scores indicating higher burnout [27]. This study showed that MBI had good reliability (Cronbach's alpha 0.92).

The presence of symptoms such as irritability (IRR), depression (DEP) and anxiety (ANX) was evaluated with the Italian version of Irritability, Depression, Anxiety Scale (IDA) [28]. This study showed that IRR, DEP, and ANX scales of IDA had good reliability (Cronbach's alpha range 0.91–0.94).

2.3. Statistical Analyses

The differences between subjects positive or not for alexithymia were tested using analyses of covariance (ANCOVA) with the TAS-20 positivity/negativity as a factor and age, gender and working seniority as covariates. Effect size calculations were measured as partial eta squared (η^2). Finally, a blockwise linear regression analysis was conducted to determine which variables were associated with hopelessness (BHS as the dependent variable). In the first block, age, gender and working seniority were entered. The second block added BHS, MBI, IRR, DEP and ANX to the model. The TAS-20 was introduced in the last step. The quality of the regression model was also tested using the Durbin–Watson statistic. P values ≤ 0.05 were deemed statistically significant.

3. Results

Descriptive statistics of the whole sample and the comparison between subjects, positive or not, for alexithymia are reported in Table 1.

Table 1. Comparison about BHS, MBI, IRR, DEP and ANX among HCWs positive (patients with a TAS-20 score ≥ 61 , $n=214$, 14.8%) or negative (patients with a TAS-20 score ≤ 61 , $n=1231$, 85.2%) for alexithymia controlling for age, gender and duration of the current episode.

	Overall ($n=1445$)	Positive for Alexithymia (score ≥ 61 on TAS-20) ($n=214$, 14.8%)	Negative for Alexithymia (score ≤ 61 on TAS-20) ($n=1231$, 85.2%)	Between Groups Comparison (ANCOVA)	Between Groups Effect Size (η^2)
BHS	4.9 ± 4.2	6.3 ± 4.8	4.7 ± 4.0	$F=27.0$ $df=1$ $p<0.001$	0.19
MBI	61.9 ± 16.3	66.9 ± 18.0	61.0 ± 15.8	$F=24.8$ $df=1$ $p<0.001$	0.17
IRR	2.7 ± 2.1	3.3 ± 2.2	2.6 ± 2.0	$F=15.9$ $df=1$ $p<0.001$	0.11
DEP	5.9 ± 3.2	6.9 ± 3.4	5.7 ± 3.1	$F=24.7$ $df=1$ $p<0.001$	0.17
ANX	5.2 ± 2.9	6.3 ± 3.2	5.1 ± 2.8	$F=31.9$ $df=1$ $p<0.001$	0.22

Comparison between individuals positive ($n=214$, 14.8%) or not for alexithymia ($n=1231$, 85.2%) controlling for age, gender and working seniority revealed that positive subjects showed higher scores on BHS, MBI, IRR, DEP and ANX than not positive ones ($p<0.001$). Effect size calculation (η^2) showed that the magnitude of the group effect for the BHS, MBU, IRR, DEP and ANX was large.

In the linear regression model (Table 2), higher working seniority, as well as higher MBI, DEP, ANX and TAS-20 scores, were associated with higher hopelessness (BHS) as the dependent variable. In the current analyses, the R^2 values demonstrated good prediction accuracy, with the model accounting for 38% of the variance in BHS. Also, the Durbin–Watson coefficient was 2.03 (near the optimum of 2.0), and the standardised residuals were normally distributed.

Table 2. Results of the linear regression analyses with BHS as dependent variables and other variables as independent. Only statistically significant variables are showed.

	Unstandardised Coefficients		Standardised Coefficient	t	P	95% Confidence Interval for B	
	B	SE	Beta			Lower Bound	Upper Bound
Working seniority	0.34	0.07	0.10	4.76	<0.001	0.20	0.49
MBI	0.21	0.06	0.08	3.60	<0.001	0.10	0.33
DEP	0.34	0.04	0.33	11.08	<0.001	0.35	0.51
ANX	0.20	0.04	0.14	4.55	<0.001	0.12	0.29
TAS-20	0.65	0.08	0.20	8.10	<0.001	0.49	0.81

$R^2=0.38$; $F=12.14$ $df=1$ $p<0.001$.

4. Discussion

This was the first study investigating the relationships between burnout and hopelessness in a large sample of HCWs during the Italian third wave of Covid-19.

Overall, our results demonstrated that the pandemic emergency has exposed HCWs to several risk factors related to the care of the Covid-19 patients, which have contributed to the increase in psychophysical stress. Moreover, managing the health emergency linked to the spread of Covid-19 required HCWs to make substantial changes in their work concerning organisational, relational and safety aspects [29,30]. In several cases there have been extensions of working hours, increasing demands for on-call duty, activation of extraordinary procedures, lack of adequate personal protective equipment, and increased physical fatigue [31]. In addition to work-related aspects, during the waves and peaks of the pandemic, there was an increasing difficulty in balancing HCWs' work and private and family life [32]. Prolonged shifts led HCWs to spend more hours away from their families, and the severity of the situation they had to cope with often made it challenging to adopt adequate recovery strategies [33]. Also contributing to the situation's complexity were the necessary mobility measures of HCWs in the areas most at risk and the changes due to the reconditioning of entire health facilities, or parts of them, in contexts also wholly dedicated to the Covid-19 emergency [31].

In our study, the prevalence of alexithymia in our sample was 14.8%, somewhat higher than those reported in other studies on the general population [5,6]. This may be explained by being an HCW per se and considering the stress of previous and current pandemic waves, perhaps leaving several HCWs in a state of exhaustion and developing psychological distress [1,34]. Also, the BHS, MBU, IRR, DEP and ANX scores were relatively higher in our sample than in the general population for the same reasons. The risk factors for the onset and maintenance of a higher alexithymia call into play the complex interplay between biological and social dimensions. Studies conducted on twins show that heredity can explain about 30-39% of the total variance in alexithymic traits, while the remaining 61-70% can be attributed to shared and primarily unshared environmental factors [35].

Moreover, increased hopelessness was associated with higher burnout and alexithymia. Perhaps, this is one of the main results of the present study. To date, no studies have investigated the relationship between burnout and hopelessness and our study findings might indicate that the development of a state of emotional, physical, and mental exhaustion triggered by excessive stress may have weakened the energy of HCWs, which, in turn, decreased efficiency and left them helpless, hopeless, pessimistic, and angry.

However, the results of our study may let us hypothesise that the presence of alexithymia is the background on which higher hopelessness and burnout may develop, reducing HCWs individual and group resilience [36,37]. Alexithymia has been demonstrated to increase the probability of developing burnout, with less professional gratification [38]. As resilience means the aptitude to cope with life stressors or adversities in a positive way, it suggests that positive coping (increasing resilience) might be lacking in HCWs with alexithymia who are prone to a maladaptive coping style and an abnormal salience for adverse effects leading to higher burnout together with anxiety and depressive symptoms, thus increasing hopelessness [1,39].

Moreover, alexithymia is a risk factor for experiencing increased levels of chronic psychosocial stress [40]. Chronic psychosocial stress has been exemplified as an imbalance of high demands and a lack of satisfaction with one's needs, on the other hand [41]. HCWs might be particularly prone to develop maladaptive coping styles that reduce the ability to cope with stressful life events when alexithymia is present [42].

Besides, our results may also support Freyberger's concept of acute "secondary alexithymia" as a reaction to stressful situations [43]. It often occurs following traumatic conditions experienced during critical periods of childhood development or due to strong emotions experienced in adulthood. Besides, secondary alexithymia has recently been related to certain diseases, such as myocardial infarction, hypertension and rheumatoid arthritis, which suggests that it may also be a coping mechanism [44]. Moreover, acute secondary alexithymia is a temporary state-dependent condition due to distress (in the present study, the third wave of the Covid-19 pandemic in Italy), often decreasing when an acute or subacute stressful situation has finished [45]. In such a perspective, alexithymia during the third wave of the Covid-19 pandemic in Italy has become a coping mechanism protecting the self against emotional distress associated with situations of intense vulnerability [44],

and it is possible to hypothesise that higher hopelessness, burnout, depressive and anxiety symptoms can reflect a state-dependent condition related to persistent and recurrent stressors as the Covid-19 subsequent waves. Nevertheless, this coping strategy is dysfunctional, triggers a vicious circle and causes the development or aggravation of more severe feelings of hopelessness, increased work exhaustion and overall psychological distress.

This may also explain the higher hopelessness, alexithymia and burnout seen in HCWs with higher working seniority. In terms of socio-demographic variables, some studies have found that younger HCWs with less work seniority show less burnout and psychological distress as at the beginning of their careers, as they are more motivated [46,47], whereas HCWs with more seniority and with a permanent contract suffer more burnout, whether due to monotony, stress or work overload [48,49]. A good work environment, based on good relations with colleagues, supported by the organisation and good remuneration may improve worker motivation even in unfavourable conditions as the pandemic, helping to prevent the onset of burnout [50]. Besides, job satisfaction is essential to achieve HCWs who are less prone to burnout and more efficient [51].

Overall, the findings of our study indicate that comprehensive strategies should be implemented to support HCWs mental health and mitigate the negative consequences of alexithymia, burnout, and hopelessness [52]. This includes developing interventions that encourage emotional expression and awareness, providing accessible mental health support services, and implementing organisational policies that promote work-life balance and self-care [53].

This study has several limitations, so results should be interpreted cautiously. The first limitation was the usage of self-rating scales with probable biases due to the nature of the self-rating scales themselves. As well we didn't measure job satisfaction as it would be an important variable moderating the effects of alexithymia, burnout and hopelessness even during the pandemic. Besides, our study lacks follow-up data as it was cross-sectional. Also, the sample was recruited during the third wave of Covid-19 pandemic in Italy, and we lack data on previous waves on HCWs psychological well-being. Finally, the sample was constituted mainly of females, which might limit the generalizability of the results concerning gender.

5. Conclusions

In conclusion, HCWs have faced unprecedented challenges during the Covid-19 pandemic and alexithymia may be relatively prevalent in HCWs during fourth wave of pandemic, increasing significant emotional and mental health consequences.

The impact of alexithymia, burnout, and hopelessness cannot be overlooked. Recognising and addressing these issues is crucial to safeguard the well-being of HCWs and ensure the provision of high-quality patient care. Supportive measures, including emotional awareness training, mental health resources, and fostering a positive work environment, are essential for navigating these challenging times and promoting the long-term sustainability of the healthcare workforce.

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