

HOPELESSNESS AND BURNOUT IN ITALIAN HEALTHCARE WORKERS DURING PANDEMIC: THE MEDIATION ROLE OF TRAIT EMOTIONAL INTELLIGENCE

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During the pandemic, **Italy** has been among the most affected nations in terms of hospital overloaded and its healthcare workforce is still struggling to face all the challenges related to the pandemic (Epifanio et al, 2021).

In this context, it has become necessary to understand the **COVID-19** epidemic health consequences on Italian health professionals at the forefront (Guanche, 2020).

BURNOUT

According to the definition of **ICD-11**, burnout is a syndrome resulting from chronic stress in the workplace, not properly managed. It is characterized by:

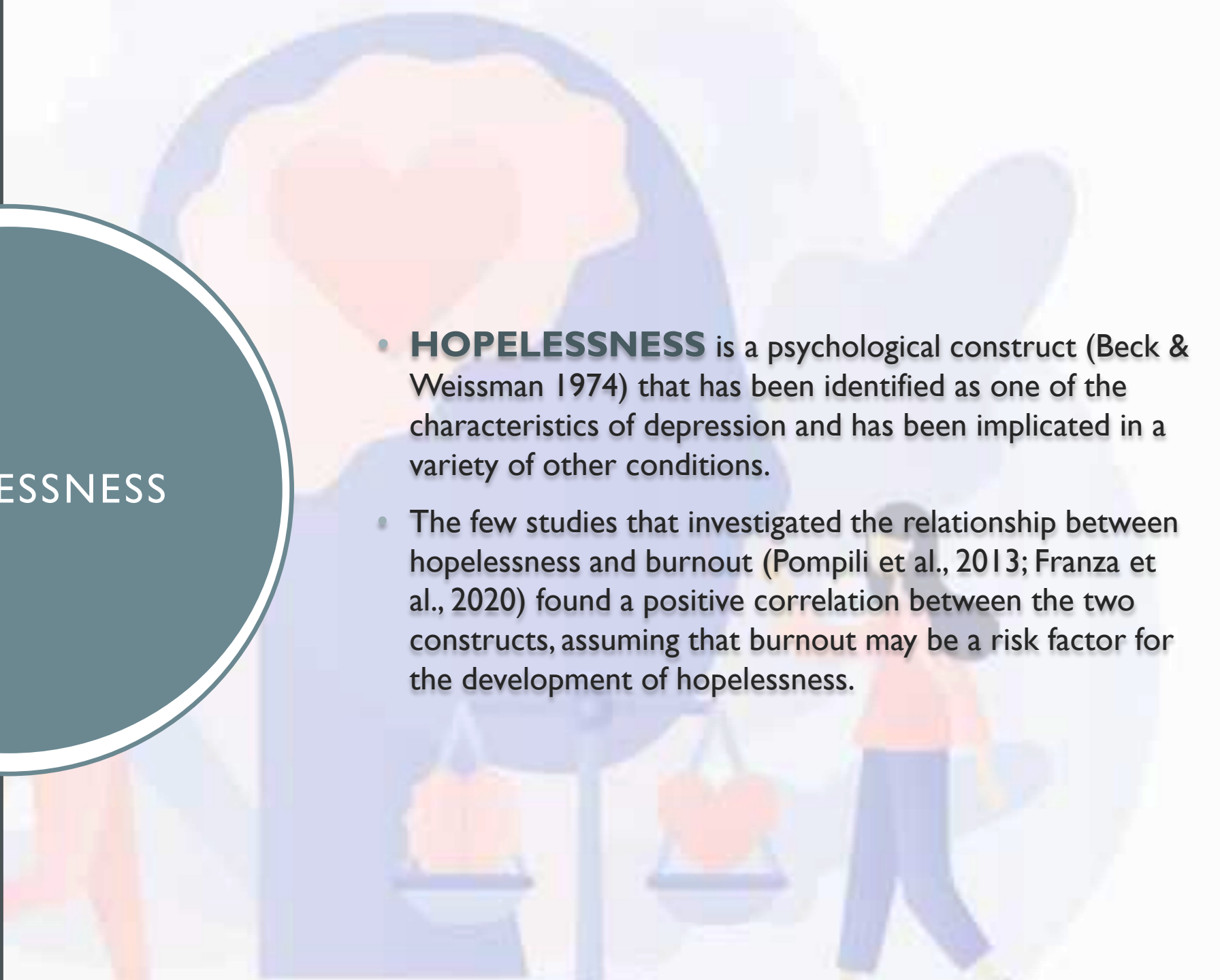
a feeling of depletion of energy or exhaustion

an increase in mental distance and negative or cynical feelings toward work and others

reduced professional effectiveness

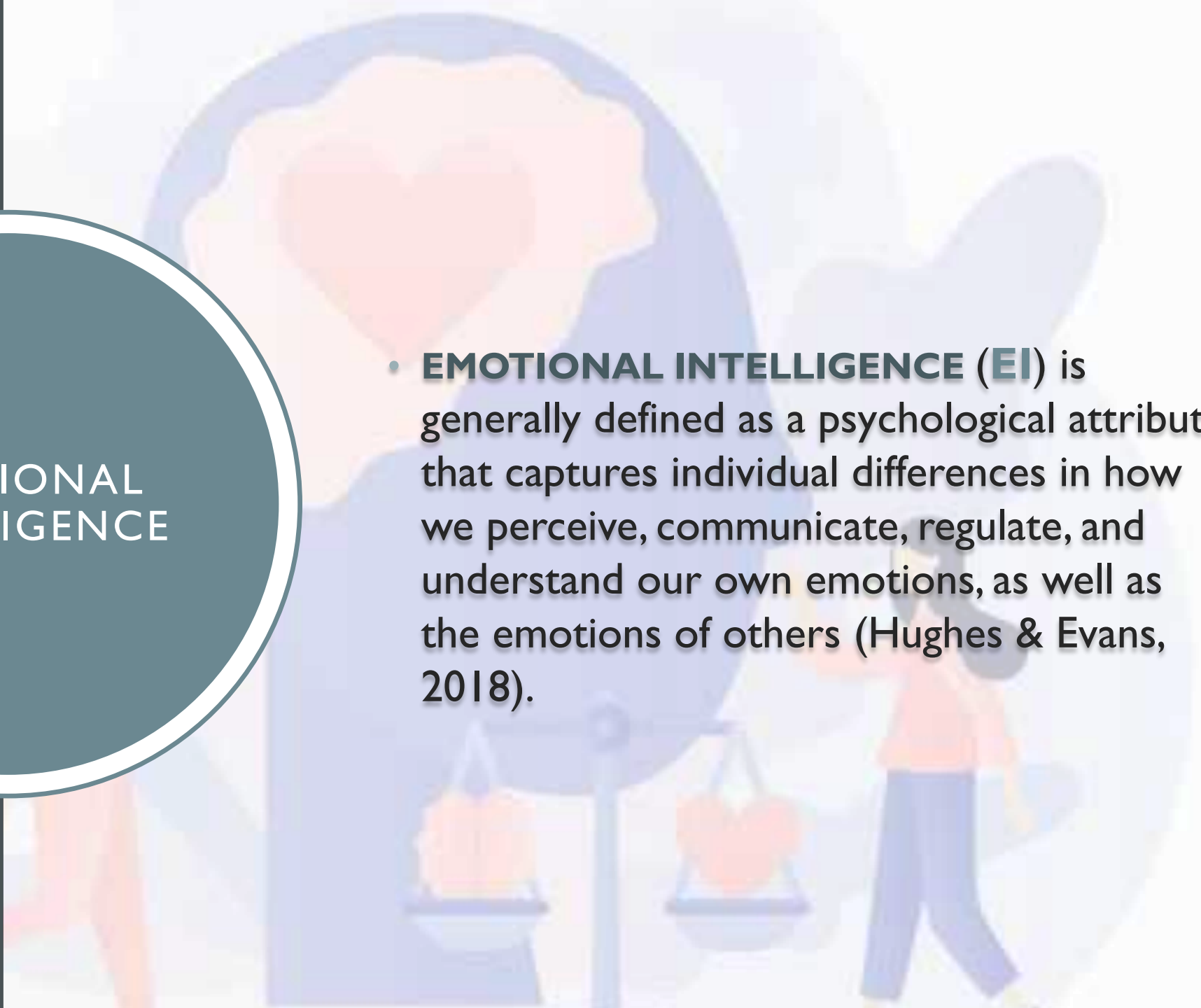


HOPELESSNESS

- **HOPELESSNESS** is a psychological construct (Beck & Weissman 1974) that has been identified as one of the characteristics of depression and has been implicated in a variety of other conditions.
 - The few studies that investigated the relationship between hopelessness and burnout (Pompili et al., 2013; Franza et al., 2020) found a positive correlation between the two constructs, assuming that burnout may be a risk factor for the development of hopelessness.
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EMOTIONAL INTELLIGENCE

- **EMOTIONAL INTELLIGENCE (EI)** is generally defined as a psychological attribute that captures individual differences in how we perceive, communicate, regulate, and understand our own emotions, as well as the emotions of others (Hughes & Evans, 2018).
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TRAIT EMOTIONAL INTELLIGENCE

- Among the different possible EI formulations, **trait EI** is conceptualized as a lower order personality construct defined as a constellation of self-emotional perceptions and behavioral dispositions (Petrides, Pita & Kokkinaki, 2007).
- Positioned within the realm of personality, the sampling domain of trait EI consists of lower-level personality facets and surface traits .
- These facets are 15 and are organized under 4 higher-order trait EI factors: emotionality, sociability, self-control, and well-being



THE ROLE OF EMOTIONAL INTELLIGENCE



EMOTIONAL INTELLIGENCE (EI) could be an important protective factor to prevent burnout.

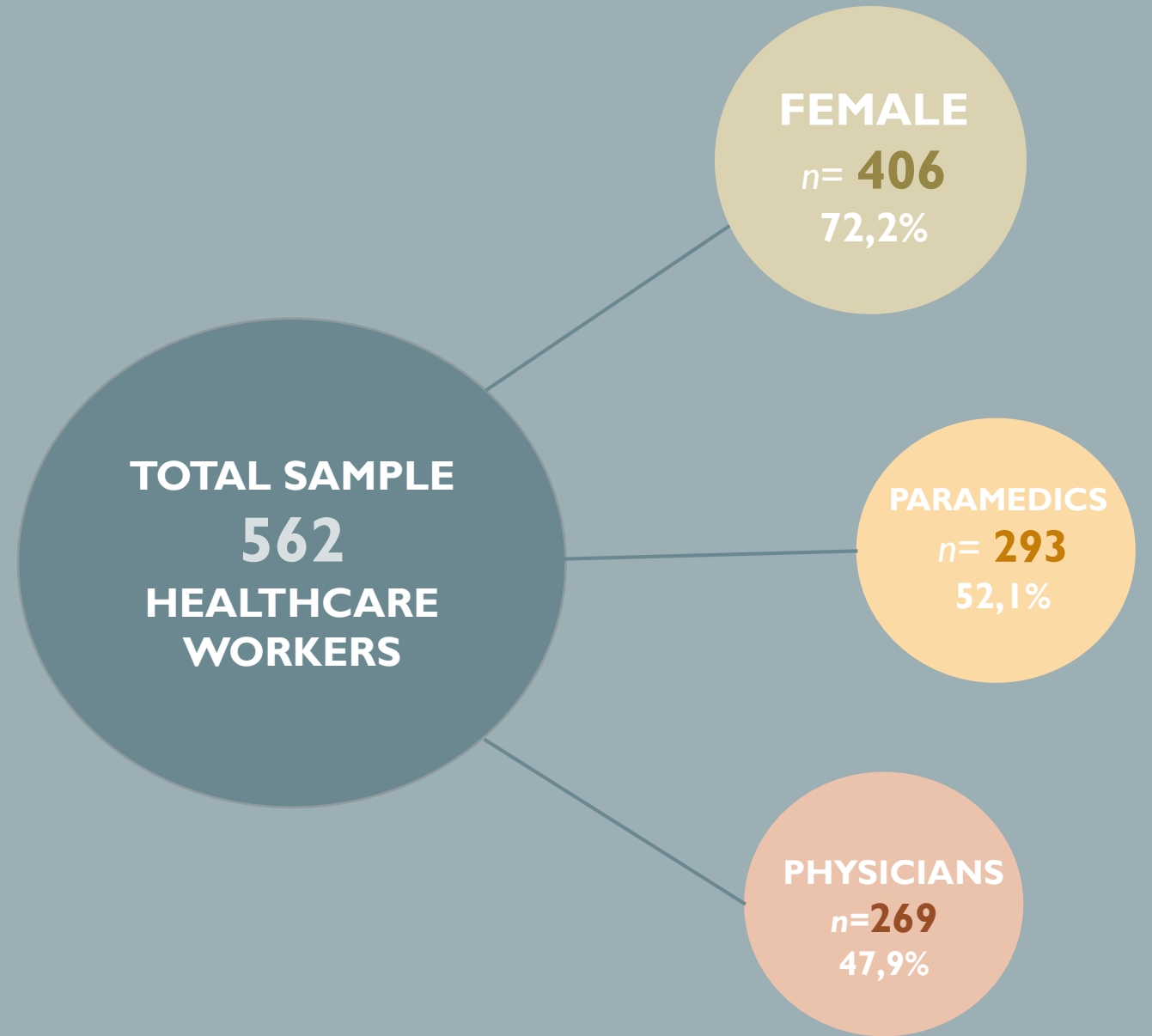
The ability to monitor one's own and other feelings and emotions and to guide one's thinking and behaviour seems to be a useful competency in dealing with stress work related (Humpel & Caputi, 2001)

AIMS

An illustration of a woman in a business suit walking past a desk with folders and a plant, with a large target symbol in the background. The word 'AIMS' is written in large, bold, black letters in the upper left quadrant of the illustration.

1. Analyze the relationship between socio-demographic variables, changes in working conditions and burnout.
2. Investigate the relationship between burnout, hopelessness and EI as a mediating variable between them.

PARTICIPANTS



The image shows a network of white human figures on a blue background. Each figure is placed on a circular base, and these bases are interconnected by a web of thin black lines, representing a social or data network. The figures are stylized and appear to be in various poses, some facing forward and others slightly turned. The overall composition is clean and modern, with a focus on connectivity and data flow.

PROCEDURES

online cross-sectional data collection was performed with Qualtrics® Survey Platform. Data collection started after 7 weeks of quarantine in Italy (25 April 2020) and was performed for about 6 weeks, until the end of lockdown measures (2 June 2020).



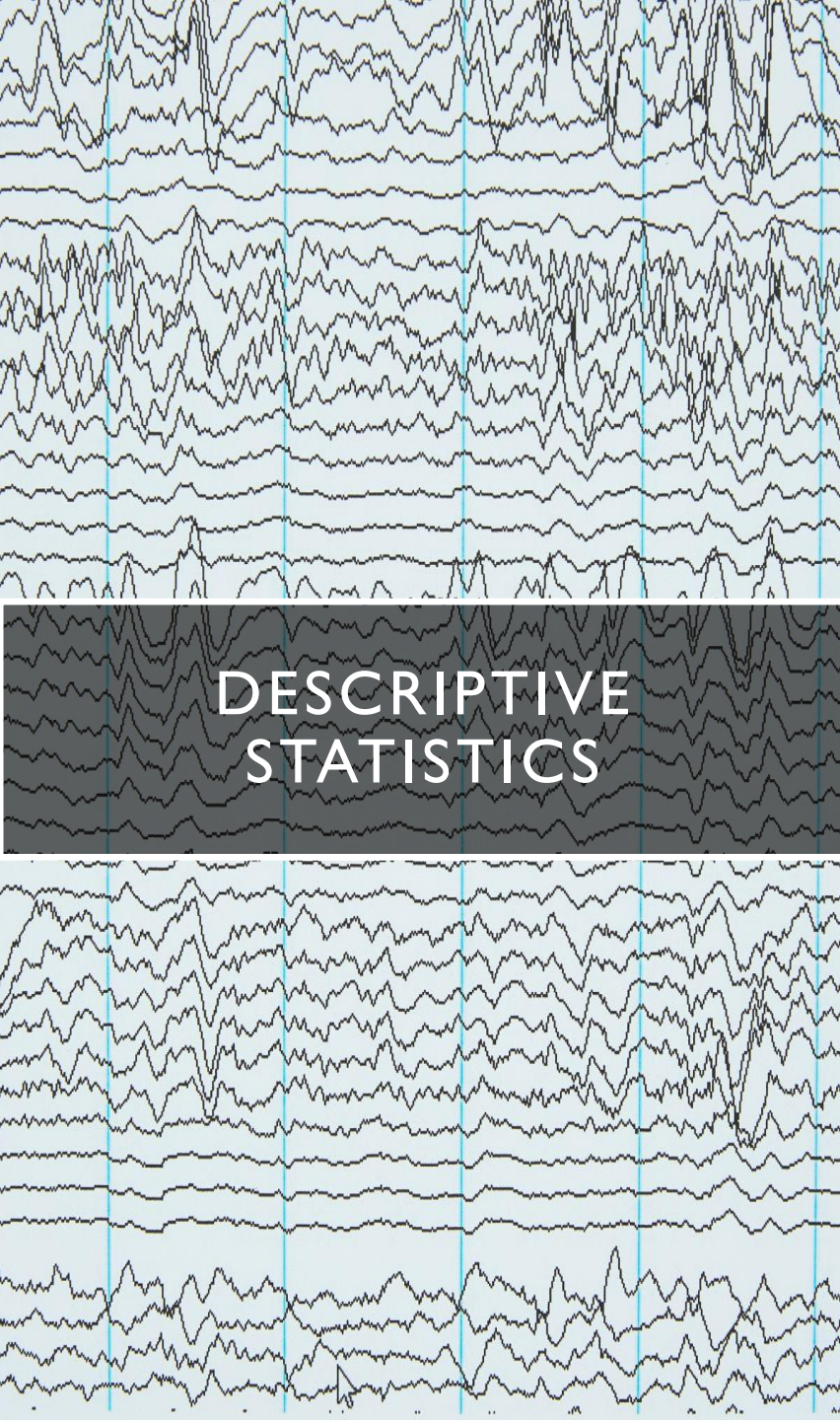
MEASURES

- Demographics and changes in workload were collected through an ad hoc questionnaire.
- Change in workload was coded as dummy variable: -1 → less workload; 0 → same workload; 1 → more workload than pre pandemic period and gender was coded as 0 → females and 1 → males.
- The Trait Emotional Intelligence Questionnaire-Short Form (**TEIQue-SF**) was used to assess the Trait Emotional Intelligence
- The Beck Hopelessness Scale (**BHS**) was used to measure feeling of hopelessness.
- The Link Burnout Questionnaire (**LBOQ**) was used to measure 4 aspects of professional burnout: Psychophysical exhaustion; Deterioration of relations with clients; Job ineffectiveness; Disappointment



STATISTICAL ANALYSES

The analysis were performed using **SPSS** (version 25) for Windows. Pearson's correlations were used to investigate associations among variables. The computational tool for SPSS, PROCESS, was used to test mediation models.



BURNOUT LEVELS IN TOTAL SAMPLE

Psychophysical exhaustion
HIGH: 20,6%
MODERATE: 29%
AVERAGE: 41,8%
LOW: 8,5%

Deterioration Relation with clients:
HIGH: 20,6%
MODERATE: 48,6%
AVERAGE: 29,7%
LOW: 1,1%

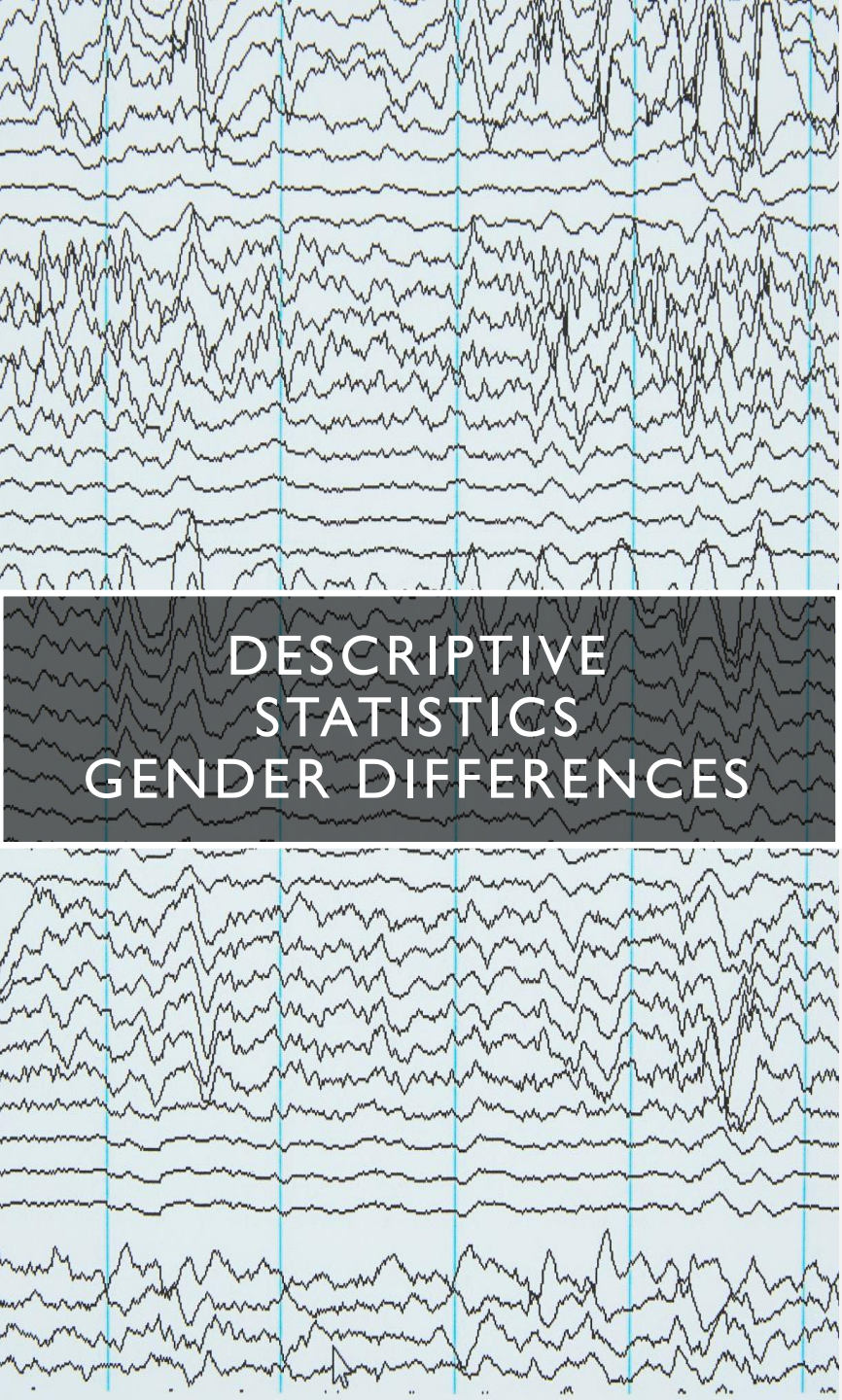
Job Ineffectiveness:
HIGH: 5%
MODERATE: 16,9%
AVERAGE: 66,5%
LOW: 11,6%

Disappointment:
HIGH: 13,2%
MODERATE: 26,9%
AVERAGE: 50,7%
LOW: 9,6%

WORKLOAD CHANGES AND HOPELESSNESS

Workload changes:
MORE: 52,7%
SAME: 31,7%
LESS: 15,8%

Hopelessness
HIGH: 10,1%
MODERATE: 23,1%
LOW: 34%
NORMAL: 32,7%



DESCRIPTIVE
STATISTICS
GENDER DIFFERENCES

FEMALES SHOWED MORE HIGH LEVELS THAN MALES IN TWO BURNOUT DIMENSIONS

Psychophysical exhaustion
HIGH:
F=22,6%→M=16%
MODERATE:
F=32%→M=16,7%
LOW:
F=6,2%→M=14,7%
 $\chi^2 = 17,59; p < 0,01$

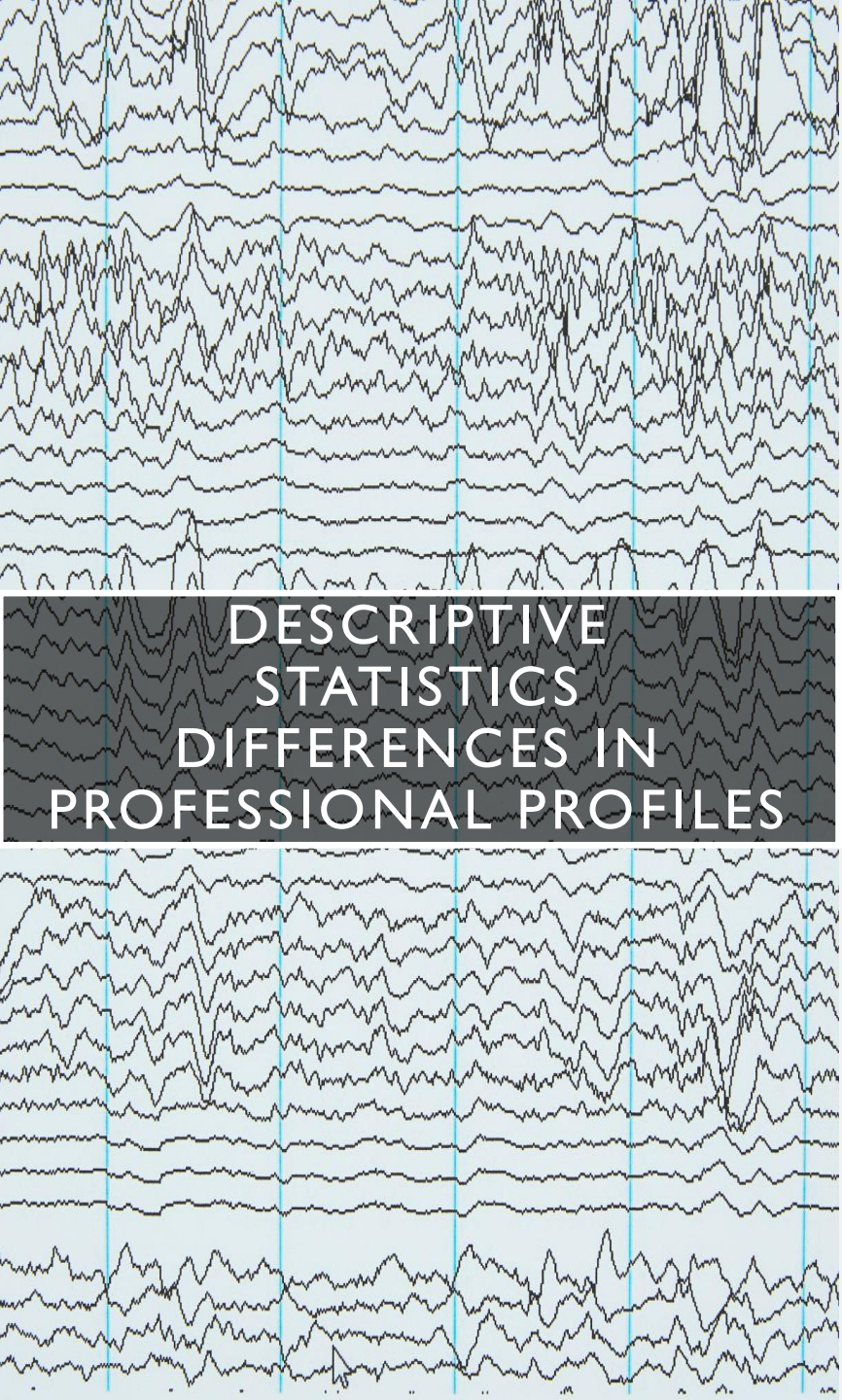
Deterioration Relation with clients:
HIGH:
F=22%→M= 17,2%
MODERATE:
F=49%→M=48%
LOW:
F=1,2%→M=0,6%
 $\chi^2 = 2,85; p > 0,05$

Job Ineffectiveness:
HIGH:
F=5,7%→M= 3,2%
MODERATE:
F=17%→M=16%
LOW:
F=7%→M=23%
 $\chi^2 = 29,04; p < 0,01$

Disappointment:
HIGH:
F=14%→M= 11%
MODERATE:
F=26%→M=26%
LOW:
F=8,6%→M=12%
 $\chi^2 = 1,94; p > 0,05$

NO DIFFERENCES IN HOPELESSNESS

Hopelessness
 $\chi^2 = 0,250; p > 0,05$



PARAMEDICS SHOWED MORE HIGH LEVELS THAN PHYSICIANS IN THREE BURNOUT DIMENSION

Psychophysical exhaustion
HIGH:
PAR=23% → PHY= 17%
MODERATE:
PAR=26,6% → PHY=31,6%
LOW:
PAR=6,1% → PHY=11,2%
 $\chi^2 = 8,340; p < 0,05$

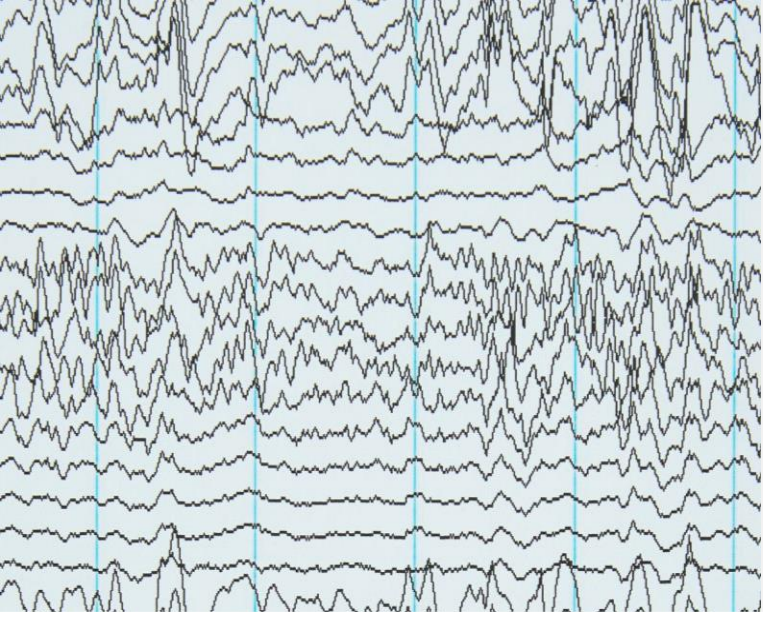
Deterioration Relation with clients:
HIGH:
PAR=25,3% → PHY= 15,6%
MODERATE:
PAR=45,7% → PHY=51,6%
LOW:
PAR=1,7% → PHY=0,4%
 $\chi^2 = 10,87; p < 0,05$

Job Ineffectiveness:
HIGH:
PAR=4,1% → PHY= 5,9%
MODERATE:
PAR=16% → PHY=17,8%
LOW:
PAR=8,2% → PHY= 15,2%
 $\chi^2 = 9,67; p < 0,05$

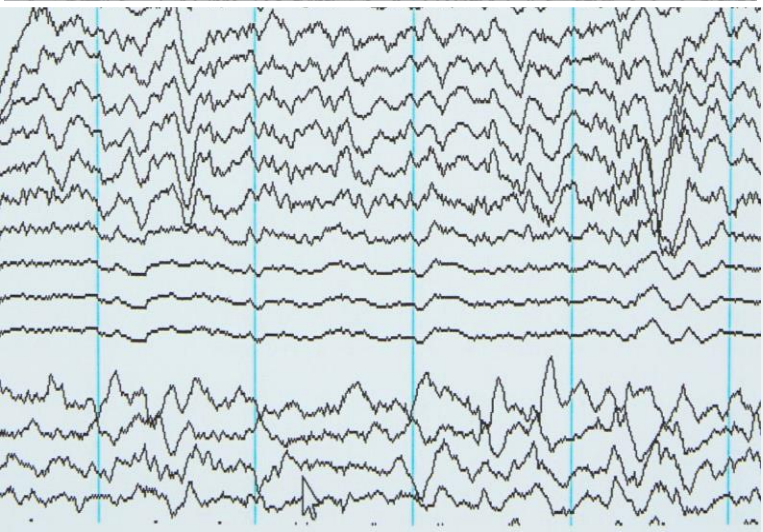
Disappointment:
NO DIFFERENCES
 $\chi^2 = 0,204; p > 0,05$

NO DIFFERENCES IN HOPELESSNESS

Hopelessness
 $\chi^2 = 2,310; p > 0,05$



**TRAIT EMOTIONAL
INTELLIGENCE
VARIABLE**



**NEGATIVE CORRELATION BOTH WITH BURNOUT
DIMENSIONS AND HOPELESSNESS**

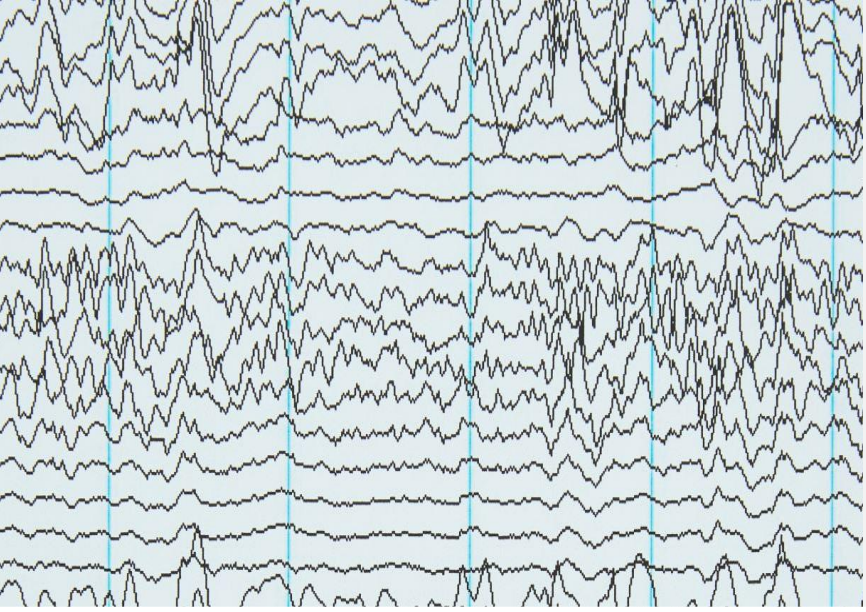
BHS →
 $r = 0.59$
 $p < 0.01$

Job
Ineffectiveness
→
 $r = -0.55$,
 $p < 0.01$

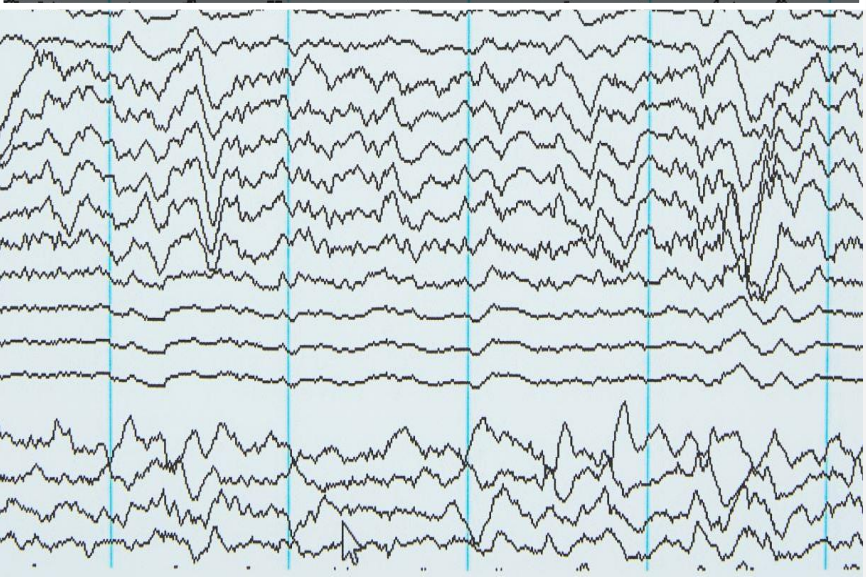
Deterioration
of relations
with clients →
 $r = -0.42$,
 $p < 0.01$

Psychophysic
al exhaustion
→
 $r = -0.55$,
 $p < 0.01$

Disappointment
→
 $r = -0.56$, $p < 0.01$



CHANGES IN
WORKLOAD
VARIABLE



SIGNIFICANT CORRELATION WITH ONLY TWO BURNOUT DIMENSIONS

Psychophysical
exhaustion →
 $r = 0,178$ $p < 0,01$

*Deterioration
Relation with
clients* → $r = 0,138$,
 $p < 0,01$

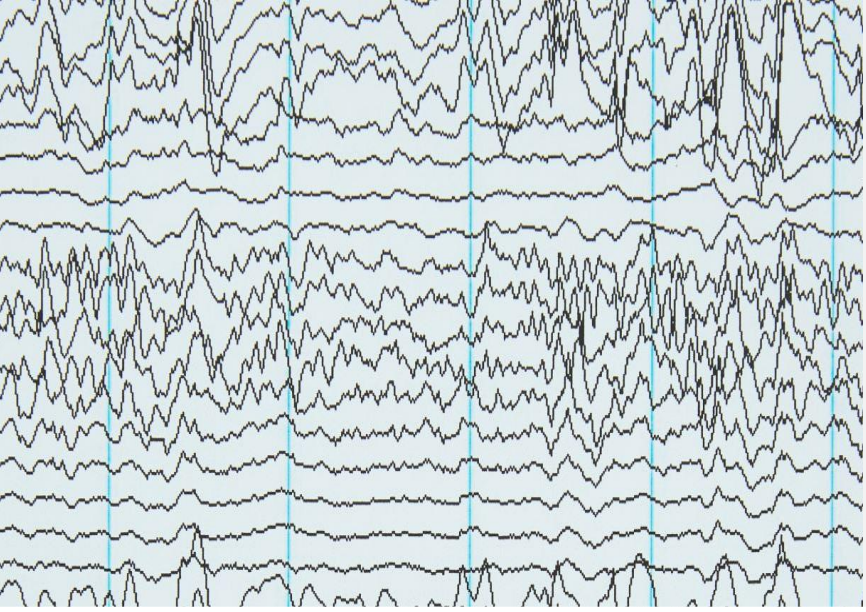
Job
Ineffectiveness →
 $r = 0,046$, $p > 0,05$

Disappointment
→ $r = 0,031$ $p > 0,05$

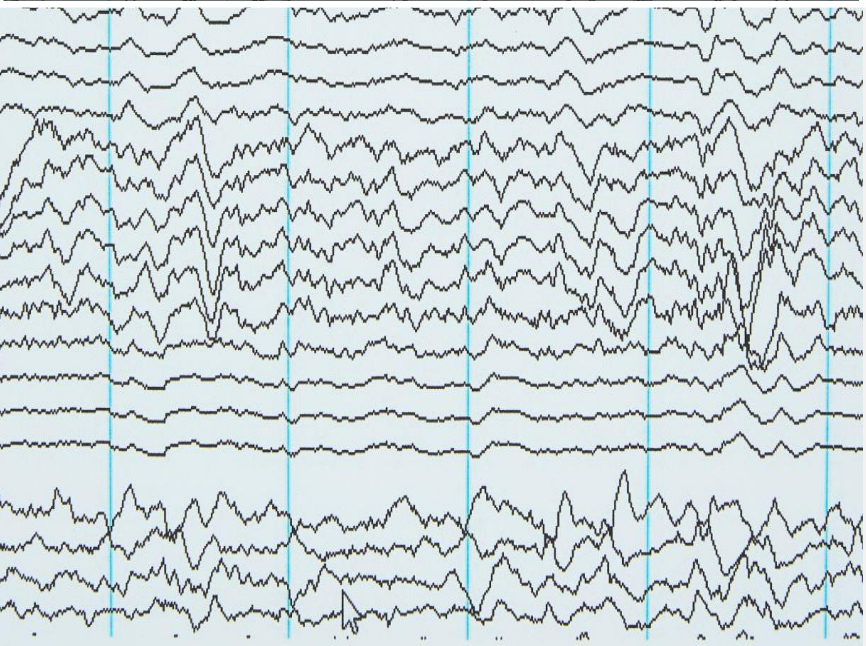
NO SIGNIFICANT CORRELATION WITH TRAIT EMOTIONAL INTELLIGENCE AND HOPELESSNESS

TEI → $r = -0,024$, $p > 0,05$

BHS → $r = 0,080$, $p > 0,05$



HOPELESSNESS
VARIABLE



POSITIVE CORRELATION WITH EVERY BURNOUT DIMENSIONS

Psychophysical
exhaustion →
 $r = 0.57, p < 0.01$

Job
ineffectiveness →
 $r = 0.46, p < 0.01$

Deterioration of
relations with
clients →
 $r = 0.35, p < 0.01$

Disappointment
→ $r = 0.63, p < 0.01$

NEGATIVE CORRELATION WITH TRAIT EMOTIONAL INTELLIGENCE

$r = -0.59, p < 0.01$

CORRELATIONS

TAB I

		Sex	Workload	Psychop. exhaustion	Det. Rel. clients	Job Ineff.	Dis.	TOT BHS	TEIQUE
Sex	Pearson's R	1	-,095*	-,136**	-,058	-,113**	-,028	-,012	,090*
	<i>p</i>		,024	,001	,169	,007	,506	,780	,033
Workload	Pearson's R	-,095*	1	,178**	,138**	,046	,031	,074	-,024
	<i>p</i>	,024		,000	,001	,272	,457	,080	,578
Psychophysical Exhaustion	Pearson's R	-,136**	,178**	1	,552**	,622**	,714**	,571**	-,550**
	<i>p</i>	,001	,000		,000	,000	,000	,000	,000
Det. Rel. with clients	Pearson's R	-,058	,138**	,552**	1	,508**	,526**	,353**	-,425**
	<i>p</i>	,169	,001	,000		,000	,000	,000	,000
Job Ineff	Pearson's R	-,113**	,046	,622**	,508**	1	,590**	,460**	-,553**
	<i>p</i>	,007	,272	,000	,000		,000	,000	,000
Disappointment	Pearson's R	-,028	,031	,714**	,526**	,590**	1	,637**	-,560**
	<i>p</i>	,506	,457	,000	,000	,000		,000	,000
TOT BHS	Pearson's R	-,012	,074	,571**	,353**	,460**	,637**	1	-,597**
	<i>p</i>	,780	,080	,000	,000	,000	,000		,000
TEIQUE	Pearson's R	,090*	-,024	-,550**	-,425**	-,553**	-,560**	-,597**	1
	<i>p</i>	,033	,578	,000	,000	,000	,000	,000	

*. Significance at $p < 0,05$.

** Significance at $p < 0,01$.

MEDIATION ANALYSIS

Regarding mediation Hypothesis results showed that Trait emotional intelligence partially mediated the relationship between every burnout dimensions and hopelessness

TEI MEDIATION

Psychophysical
exhaustion → BHS

$B = -2.80$, $p < 0,01$; 95%
confidence interval
[-3.31, -2.29]

TEI MEDIATION

Deterioration of relations
with clients → BHS

$B = -3,77$, $p < 0,01$; 95%
confidence interval
[-4,27, -3,26]

TEI MEDIATION

Job
ineffectiveness → BHS

$B = -3,41$, $p < 0,01$; 95%
confidence interval
[-3.96, -2,87]

TEI MEDIATION

Disappointment → BHS

$B = -2,42$, $p < 0,01$; 95%
confidence interval
[-2,49 | -1,92]

DISCUSSION

- This results showed that TEI could act as protective factor on burnout levels and hopelessness.
- However, full mediation was not obtained as further risk factors, including alienation, and/or resources, such as self-efficacy and social support, could play a significant role in the buffering process and could potentially contribute to mediate the association between burnout and Hopelessness.
- Our preliminary findings support the need to integrate considerations on both psychological risk and protective factors into COVID-19 care, including the monitoring of psychological symptoms and social needs especially among healthcare workers.

LIMITATIONS

This study had several limitations that should be considered when interpreting our results:

- **THE CROSS-SECTIONAL DESIGN** which not allow to the effect of the changes of the variables over time.
- **THE USE OF SELF-REPORTS ONLY**, which may be associated with common method bias.

Additionally, although recruitment procedures (i.e., snowball sampling method through social media, emails and university's website) allowed us to reach as many voluntary participants as possible during forced social distancing, they may have biased sample's composition in several ways:

- online recruitment procedures may naturally select individuals who are more active on both the internet and social media platforms.

A network diagram consisting of numerous blue circular nodes of varying sizes, interconnected by thin, light blue lines. The nodes are scattered across the frame, with a higher density in the upper and lower right areas. The background is a light, pale blue gradient.

THANK YOU FOR YOUR ATTENTION!

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