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Article

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Abstract: The aim of this study was to investigate the work engagement and burnout in healthcare professionals in a private health unit in Greece. A cross-sectional study was conducted with a sample of 151 professionals (doctors, nurses, administrative staff and professionals of other specialties). The questionnaire included demographic and work-related information and the Utrecht Work Engagement Scale and Maslach Burnout Inventory. Analysis was performed by SPSS v.26. With regard to the work engagement, the participants presented a medium score in absorption and a medium to high score in vigor and dedication. In addition, they presented low score in depersonalization, a medium score in emotional exhaustion and a high score in personal accomplishment. Those who had a working contract for an indefinite period had higher score in all the dimensions of burnout. Vigor, dedication and absorption were negatively correlated with emotional exhaustion and depersonalization and positively with personal accomplishment. Healthcare professionals in private health sector in Greece present moderate work engagement and experience moderate levels of burnout. Work engagement is associated with burnout and plays an important role in its prevention. There are some significant differences in work engagement and burnout based on several demographic and work-related characteristics.

Keywords: work engagement; burnout; health professionals; private sector; healthcare unit

1. Introduction

Healthcare workers have an active role in health system and in patient care. However, these professionals are at high risk for occupational burnout [1]. Burnout can be caused by various reasons (eg., strenuous work, perceived lack of control, low extrinsic and intrinsic rewards for the job etc.) and has a very negative impact on the professionals' well-being. Among the factors that promote workers' psychological well-being, work engagement has a significant contribution [2]. Work engagement is a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Vigor refers to high levels of energy and mental resilience while working. Dedication refers to being strongly involved and deriving a sense of significance from one's work and absorption refers to being totally and happily immersed in one's work [3]. Work engagement is the assumed opposite of burnout [4]. However, Schaufeli and Bakker argue that burnout and work engagement are two distinct concepts [5].

Work engagement is also crucial in providing exemplary healthcare services because engaged healthcare professionals deliver high-quality, cost-effective care and pursue activities beyond their formal job descriptions [6,7].

There are numerous factors (both organizational and individual) that are associated with the work engagement of health professionals. Lesener et al. have categorized the drivers of work engagement into group level, leader level, and organizational level and established the high positive impact of job resources on work engagement [8].

Inconsistent results have been reported on work engagement of healthcare professionals and this may be related to the different measuring instruments used. Thus, Engelbrecht et al. argue that

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healthcare professionals report moderate to high work engagement with a higher score in dedication [9]. In contrast, a World Health Organization study found that only 13% of workers worldwide are fully engaged at work and the majority of nurses were dissatisfied with their work. In addition, 40% of health professionals (doctors, nurses, and midwives) would resign from their employment if they were not satisfied with their work [10]. This finding is consistent to that found by other researchers, who point out that the majority of employees do not have an optimal engagement level, especially in professions that require significant dedication and energy [11].

One of the positive consequences of work engagement is job satisfaction, which is further negatively associated to burnout [12]. Work engagement is also positively associated with resilience and negatively with burnout and stress, particularly caused by personal attacks at work. With regard to the use of functional or dysfunctional coping strategies, negative correlations between work engagement and problem avoidance and emotional distress strategies have been found [2].

Furthermore, it is noted that the importance of engaged healthcare staff was accentuated during the Covid-19 pandemic [13]. Health care professionals working on the front line of the COVID-19 pandemic are at risk of psychological distress, and work engagement could be a positive attitude that could serve as a protective factor [14].

Higher dedication is reported by women, doctors and nurses, senior officials and older people [15–17]. Regarding private health units, moderate to high levels of work engagement have been found with dedication receiving the highest score, followed by absorption and vigor [18].

On the other hand, burnout has been recognized as a syndrome and consists of three dimensions (emotional exhaustion, depersonalization, personal accomplishment). It is associated with negative effects on physical and mental health, low productivity, frequent absences from work and low work engagement [19]. The role of health systems is crucial in this syndrome. That is, burnout manifests in individuals, but it's fundamentally rooted in systems [20].

Many studies have examined burnout in healthcare professionals and it has been found that it affects 10-70% of nurses and 30-50% of physicians, as well as at least 20% of Emergency Department and Intensive Care Unit workers [21–26]. According to a recent study, more than half of health workers in the USA reported symptoms of burnout [20].

One related study in Greece found moderate levels of burnout and high emotional exhaustion. Work in specific departments (eg Pediatric and Psychiatric Clinic, Emergency Department etc.) was associated with higher emotional exhaustion. Also, those with many years of working had lower levels of burnout and men had higher depersonalization [27]. On the contrary, in Katsiou's research with nurses, no differences were found based on demographic or work characteristics [28].

Some researches were conducted amid the COVID-19 pandemic and found moderate to high levels of burnout [29,30].

Various studies have examined the burnout of the health professionals in association with their demographic characteristics. In such a study in Greece, men reported slightly lower levels (mainly in the dimension of personal achievements) and university graduates higher levels compared to secondary school graduates [30].

A few studies have been conducted in private healthcare units and have found moderate to high levels of burnout and higher compared to public health facilities [31–33]. Also, Al-Omari et al. found higher emotional exhaustion in women and nurses compared to workers in other specialties [32].

Work engagement plays an important role in burnout prevention, and this is particularly significant under the strenuous conditions that modern healthcare is facing [11,13]. Zeng and Chen suggested that employees who experience burnout tend to report lower work engagement [34]. Conversely, burnout is reduced when employees have high levels of work engagement [35].

However, the relationship between work engagement and burnout has not been sufficiently studied in private healthcare professionals in Greece. The aim of this study was to evaluate the work engagement and burnout of professionals in a private healthcare unit and to identify the demographic and work relate characteristics that affect them. As healthcare professionals play a very important role in the healthcare system, these concepts can affect their work efficiency, as well as the quality of the care provided [36]. According to the literature review, it was hypothesized that:

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- There are significant differences in their work engagement, based on their demographic and work characteristics (hypothesis 1)
- There are significant differences in their burnout, based on their demographic and work characteristics (hypothesis 2)
- There is a significant correlation between work engagement and burnout of the participants (hypothesis 3).

2. Methods

2.1. Design-procedure

This study employed a quantitative cross-sectional design with a convenience sampling method. The setting was a private healthcare unit in the southern suburbs of Athens, Greece. The participants took the questionnaires by the researcher and completed them in their office or in their home. The duration of the study was four months (January-April 2022).

2.2. Participants

The sample consisted of 151 employees (n=151) working in the above private healthcare unit. They were doctors, nurses, administrative staff and professionals of other specialties (eg. medical laboratory technicians, computer sciences specialists etc). Their detailed demographic and work-related characteristics are presented in Table 1.

Table 1. Demographic characteristics of the sample and work-related information.

		Frequency	%
Sex	Man	61	40.4%
	Woman	90	59.6%
Age	18-25 years old	22	14.6%
	26-35 years old	40	26.5%
	36-45 years old	44	29.1%
	46-55 years old	36	23.8%
	>55 years old	9	6.0%
Marital status	Married- no having children	14	9.3%
	Married- having children	57	37.7%
	Single	67	44.4%
	Separated/ divorced	11	7.3%
	Widow/er	2	1.3%
Number of children	0	86	57.0%
	1	13	8.6%
	2	47	31.1%
	3	5	3.3%
Level of education	Post-secondary education graduate	50	33.1%
	University/Technological Educational Institute graduate	72	47.7%
	M.Sc./ Ph.D. Holder	29	19.2%
Income/month	Up to 800 €	61	40.4%
	801–1300 €	71	47.0%
	>1301 €	19	12.6%
Working status	Contract for an indefinite period	124	82.1%
	Contract for a definite period	27	17.9%
Years of work in the healthcare unit	<5 years	47	31.1%
	6-10 years	28	18.5%
	11-15 years	38	25.2%
	>16 years	38	25.2%

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Specialty	Nurse	54	36.0%
	Doctor	18	12.0%
	Administrative staff	53	35.3%
	Professional of other specialties	25	16.7%

3. Measures

A composite questionnaire was used which included demographic and work-related information and the Utrecht Work Engagement Scale and the Maslach Burnout Inventory. These scales have been translated and culturally adapted in the Greek population.

3.1. Demographic and work-related information

In the first section of the questionnaire, the participants answered questions about their sex, age, marital status and level of education. They also reported the number of their children and their monthly income in Euros (up to 800€, 801-1300 €, >1301 €). With regard to their working status, they reported their specialty (eg. doctor, nurse), if they had a contract for a definite or an indefinite period and the years that they had been working in the healthcare unit.

3.2. Utrecht Work Engagement Scale

The Utrecht Work Engagement Scale (UWES) assesses levels of energy and mental resilience while working, along with sense of significance, inspiration, pride, challenge and concentration in work. It consists of 17 items divided in the following subscales:

- Vigor, eg. "At my work, I feel bursting with energy".
- Dedication, eg. "I am enthusiastic about my job".
- Absorption, eg. When I am working, I forget everything else around me.

Vigor has 6 items, dedication 5 items and absorption 6 items. Answers are rated on a 5-point Likert scale (1= never, 2= sometimes, 3= often, 4=very often, 5= always) and the higher scores in each subscale indicate higher work engagement.

The Utrecht Work Engagement Scale has been translated in various languages and has demonstrated good psychometric properties [37]. In this study, its Greek version was used and internal consistency reliability was very good to excellent (Cronbach's Alpha value: Vigor=0.914, Dedication=0.907, Absorption=0.892) [38].

3.3. Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI) is a psychological assessment instrument comprising twenty-two symptom items pertaining to occupational burnout. These items are divided into the dimensions of emotional exhaustion, depersonalization and personal accomplishment [4].

- *emotional exhaustion* measures feelings of being emotionally overextended and exhausted by one's work, eg. "*I feel frustrated by my work".*
- *depersonalization* measures an unfeeling and impersonal response toward recipients of one's service, care, treatment, or instruction, eg. "*I feel I look after certain patients/clients impersonally, as if they are objects".*
- personal accomplishment measures feelings of competence and successful achievement in one's work, eg. "Through my work, I feel that I have a positive influence on people".

The questions are answered on a 7-point Likert scale (0=never happens to me, 1= a few times a year or less, 2= once a month or less, 3= a few times a month, 4= once a week, 5= a few times a week, 6= it happens to me every day). High scores in the emotional exhaustion or depersonalization scales, or low scores in the personal accomplishment scale correspond to greater experienced burnout.

This inventory is the most commonly used tool to measure burn out and it has been used in a variety of studies in health professionals (e.g., nurses, physicians, health aides, health counselors, etc). In this study, its Greek version was used [39]. Its internal consistency reliability was found to be

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good to excellent for all its subscales (Cronbach's Alpha value: emotional exhaustion=0.901, depersonalization=0.889, personal accomplishment=0.786).

4. Data analysis

It was performed by the program IBM SPSS (Statistical Package for the Social Sciences, v.26). The internal consistency reliability of the scales used was assessed by Cronbach's alpha coefficient. Alpha coefficient values of 0.70 or higher were deemed to indicate good reliability. The Kolmogorov-Smirnov test or Shaphiro-Wilk tests were used to examine the normality of the quantitative variables. The analysis included descriptive statistics (frequencies and percentages %) and Pearson's correlation coefficient to examine linear correlations among quantitative variables. T-test and ANOVA were used to check statistically significant differences between two or more groups of categorical variables, correspondingly. Multiple comparisons in ANOVA were performed by Bonferroni post hoc test. The statistical significance level (p-value) was set to 5%.

5. Ethics

Each participant was asked if he/she wanted to take part in the study, after being provided with information about its purpose. Those who agreed to participate signed the informed consent and took the questionnaire. They were given assurance of anonymity and confidentiality of the information provided and were informed that they could stop completing the questionnaire at any time if they wished. The data collected remained protected and were used exclusively for the purpose of the study.

6. Results

One hundred and ninety-six (196) questionnaires were distributed and one hundred and fifty-one (151) of them were given back. That is, the response rate in this study was 77%.

Descriptive statistics for the questionnaires and their subscales are presented in Table 2. With regard to the Utrecht Work Engagement Scale, the highest score was recorded in the dedication subscale (Mean=3.44, SD=0.92) and the lowest score in the absorption subscale (Mean=3.06, SD=0.85). A medium score was also recorded in the vigor subscale (Mean=3.28, SD=0.82). That is, the participants presented a medium score in absorption and a medium to high score in vigor and dedication to their work. As far as the Maslach Burnout Inventory, they presented low score in depersonalization (Mean=7.93, SD=4.83), a medium score in emotional exhaustion (Mean=25.11, SD=9.37) and a high score in personal accomplishment (Mean=32.36, SD=8.14).

Table 2. Descriptive statistics for the questionnaires and their subscales.

	Mean	SD	Min	Max	Range
Utrecht Work Engagement Scale					
Vigor	3.28	0.82	1	5	4
Dedication	3.44	0.92	1	5	4
Absorption	3.06	0.85	1	4.83	3.83
Maslach Burnout Inventory					
Emotional exhaustion	25.11	9.37	2	50	48
Depersonalization	7.93	4.83	0	26	26
Personal accomplishment	32.36	8.14	5	46	41

With regard to the Utrecht Work Engagement Scale, the following significant differences were found (see Table 3):

- The professionals of rest specialties had lower score than doctors, nurses and administrative staff in vigor [$F(3,146)=2.771$, $p=0.044$, partial $eta^2=0.054$], dedication [$F(3,146)=18.826$, $p=0.001$, partial $eta^2=0.279$] and absorption [$F(3,146)=3.552$, $p=0.106$, partial $eta^2=0.068$].

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- those who were working for <5 years in the healthcare unit had higher score than the rest categories in absorption [F(3,147)=3,344, p=0.021, partial eta^2=0.064).
- With regard to the Maslach Burnout Inventory, the following significant differences were found (see Table 3):
- Women had higher score than men in personal accomplishment (t=-2.678, df=149, p=0.008, Cohen's d= -0.444).
- Those who had a working contract for an indefinite period had higher score than those who had a working contract for a definite period in emotional exhaustion (t=3.302, df=149, p=0.001, Cohen's d=0.701), in depersonalization (t=2.941, df=149, p=0.004, Cohen's d=0.625) and in personal accomplishment (t=2.320, df=149, p=0.022, Cohen's d=0.493).
- The professionals of the rest specialties had lower score than doctors, nurses and administrative staff in personal accomplishment [F(3,146)=11.121, p=0.001, partial eta^2=0.005).
- those who were working for <5 years in the healthcare unit had lower score than the rest categories in depersonalization [F(3,146)=4.297, p=0.006, partial eta^2=0.081).

Table 3. Means and differences between the demographic and work-related subcategories in the Utrecht Work Engagement Scale and the Maslach Burnout Inventory.

	Utrecht Work Engagement Scale			**Maslach Burnout Inventory**		
	Vigor	**Dedication**	**Absorption**	**Emotional exhaustion**	**Depersonalization**	**Personal accomplishment**
Gender						
Man	3.2	3.3	3	25.8	8.4	30.2
Woman	3.4	3.5	3.1	24.6	7.6	33.8
	t= -1.586, p=0.115	t= -1.131, p=0.260	t= -1.359, p=0.176	t= 0.745, p=0.457	t= 1.086, p=0.288	t= -2.678, **p=0.008**
Marital status						
Married - no having children	3.1	3.2	2.9	25.4	9.4	32.1
Married - having children	3.2	3.4	3	25.2	7.8	31.8
Single	3.4	3.6	3.1	24.9	7.5	33.1
Other	3.3	3.5	2	25.5	9	31
	F=0.446, p=0.720	F=0.867, p=0.460	F= 0.268, p=0.849	F=0.028, p=0.994	F=0.795, p=0.499	F= 0.406, p=0.749
Level of education						
Post-secondary	3.2	3.2	3	23.9	7.5	32.8
University/ Technological education	3.3	3.5	3	25.6	8.5	31.3
M.Sc./ Ph.D. Holder	3.5	3.6	3.3	26	7.3	34.2
	F=1.182, p=0.077	F= 2.399, p=0.094	F= 1.356, p=0.261	F=0.647, p=0.525	F= 0.823, p=0.441	F= 1.525, p=0.221
Working status						

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Contract for an indefinite period	3.2	3.5	3	26.3	8.5	33.1
Contract for a definite period	3.5	3.4	3.2	19.9	5.5	29.1
	t= -1.780, *p*=0.375	t= 0.272, *p*=0.786	t= -0.821, *p*=0.413	t= 3.302, ***p*=0.001**	t= 2.941, ***p*=0.004**	t= 2.320, ***p*=0.022**
Specialty						
Nurse	3.5	3.8	3.2	24.9	8.2	35.4
Doctor	3.5	4.1	3.1	24.7	7.4	36.1
Administrative staff	3.2	3.2	3.1	27.3	7.9	31.2
Professionals of other specialties	3	2.6	2.6	21.3	7.4	26.1
	F= 2.771, ***p*=0.044**	F=18.826, ***p*=0.001**	F=3.552, ***p*=0.016**	F= 2.473, *p*=0.064	F=0.229, *p*=0.876	F=11.121, ***p*=0.001**
Years of work in the healthcare unit						
<5 years	3.5	3.6	3.3	22.4	6.2	30.9
6-10 years	3	3.3	2.8	27.6	9.5	34.1
11-15 years	3.2	3.5	3	25.8	9.3	33.4
>16 years	3.2	3.5	3	25.9	7.7	31.8
	F=2.631, *p*=0.052	F=1.325, *p*=0.268	F= 3.344, ***p*=0.021**	F=2.161, *p*=0.095	F=4.297, ***p*=0.006**	F= 1.219, *p*=0.305

Correlations between the subscales of the Utrecht Work Engagement Scale and the Maslach Burnout Inventory are presented in Table 4. Vigor was negatively correlated with emotional exhaustion (r= -.249, $p<0.01$) and depersonalization (r= -.287, $p<0.01$) and positively with personal accomplishment (r= .356, $p<0.01$). Dedication was negatively correlated with depersonalization (r= -.177, $p<0.05$) and positively with personal accomplishment (r= .435, $p<0.01$). Absorption was also was negatively correlated with emotional exhaustion (r= -.190, $p<0.05$) and depersonalization (r= -.201, $p<0.05$) and positively with personal accomplishment (r=.269, $p<0.01$). The strongest correlation was found between dedication and personal accomplishment. That is, the higher the dedication to work, the higher the personal accomplishment of the health professionals. On the contrary, the weakest significant correlation was recorded between dedication and depersonalization. The correlation of absorption with emotional exhaustion and depersonalization was also weak.

Table 4. Correlations between the Utrecht Work Engagement Scale and the Maslach Burnout Inventory.

	Utrecht Work Engagement Scale			**Maslach Burnout Inventory**		
	Vigor	Dedication	Absorption	Emotional exhaustion	Depersonalization	Personal accomplishment

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Utrecht Work Engagement Scale						
-Vigor	1					
-Dedication	.704**	1				
-Absorption	.817**	.782**	1			
Maslach Burnout Inventory						
-Emotional exhaustion	-.249**	-.080	-.190*	1		
-Depersonalization	-.287**	-.177*	-.201*	.495**	1	
- Personal accomplishment	.356**	.435**	.269**	-.059	-.193*	1

Note: *. Correlation is significant at the 0.01 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

7. Discussion

The current study evaluated the work engagement and burnout of professionals in a private healthcare unit in Greece. No other study has examined this topic in this country, thus highlighting its novelty.

The primary result, which is discussed below, was the significant negative correlation between work engagement and burnout. That is, the health professionals with high work engagement experienced less burnout.

As far as the Utrecht Work Engagement Scale is concerned, the participants presented a medium score in absorption and a medium to high score in vigor and dedication to their work. Similarly, Kartal has found that private and public healthcare professionals have medium levels of work engagement [18].

The highest score was recorded in the dedication subscale, followed by the vigor and absorption subscales. A slightly different pattern has been reported by Kartal. More specifically, in his study dedication received the highest score, followed by absorption and vigor [18]. Further, the above results indicate that the dedication to work is a significant dimension of the work engagement.

As it is expected, the professionals' specialty is associated with their engagement to their work. The professionals of other specialties (that is, apart from doctors, nurses and administrative staff) had lower work engagement. An additional interesting finding is that those who were working for <5 years in the healthcare unit had higher score in absorption. This denotes that the working years of the health professionals are associated with their absorption to their work. These findings are different than those found in other studies [15–17]. Thus, hypothesis 1 was partially confirmed.

In addition, the participants presented low score in depersonalization, a medium score in emotional exhaustion and a high score in personal accomplishment. Burnout is common among healthcare professionals, as recent studies reveal [21,25,26]. In Greece, moderate levels of burnout have also been found in health workers, although these studies have been conducted in the public health system [26–28].

Hypothesis 2 was also partially confirmed. In line with Tsirka, women had higher score than men in personal accomplishment [30]. In contrast, Bogiatzaki et al. found that the score in personal accomplishment is higher in men [27]. Those who had a working contract for an indefinite period had higher score in all the dimensions of burnout (emotional exhaustion, depersonalization and personal accomplishment). In addition, those who were working for <5 years in the healthcare unit had lower score in depersonalization. In contrast, Bogiatzaki et al. found that those with fewer working years had higher burnout [27]. The professionals of other specialties had lower score than the rest specialties in personal accomplishment.

Vigor, dedication and absorption were negatively correlated with emotional exhaustion and depersonalization and positively with personal accomplishment. Similar results are reported by Panari et al. [35]. Schaufeli and Bakker have also argued that burnout can be reduced through

intervention that strengthen the work engagement [5]. Moreover, several other researchers have also argued that work engagement plays an important role in burnout prevention, especially in the COVID-19 pandemic era [14,29,30]. According to the above results, hypothesis 3 was also confirmed.

The strongest correlation was found between dedication and personal accomplishment. It is an expecting result, which highlights the significant role of dedication to work to the prevention of the burnout. On the contrary, the weakest significant correlation was found between dedication and depersonalization. It seems that dedication to work has a lower impact on the dimension of depersonalization. Besides, there was not significant correlation between dedication and emotional exhaustion. The above results highlight the various associations of the dedication to work to the dimensions of the burnout syndrome.

The strengths of this research include its originality for the Greek health professionals and the fact that it was conducted on a heterogeneous sample (with regard to the specialty). A primary limitation is the type of this study (cross-sectional), in which causal relationships cannot be supported. Moreover, the study was carried out in only single private health institution and, therefore, the findings have low generalizability. Furthermore, we should have in mind that this study was carried out amid the COVID-19 pandemic and this may has impacted the burnout symptoms and the work engagement dimensions reported.

Notwithstanding the limitations discussed above, these results have important clinical implications, giving recommendations to the policy makers and the managers of private health units to support and promote work engagement and, in turn, to prevent and address burnout.

Future research is suggested to further examine, with greater sample, the demographic and work-related characteristics that contribute to the work engagement and burnout of the professionals who work in private health units. It would also be interesting to compare the above variables between the private and public health sector, in order to find significant differences. Moreover, engagement to work and burnout could be also evaluated in a longitudinal study design or in specific specialties (eg doctors, nurses) who work in private health units.

8. Conclusions

Healthcare professionals in private health sector in Greece present moderate work engagement and experience moderate levels of burnout. Work engagement is negatively associated with burnout. There are some significant differences in work engagement and burnout based on several demographic and work-related characteristics. Work engagement is a significant protective factor that should be promoted among healthcare professionals to prevent and address their burnout.

Conflicts of Interest: The authors declare no conflict of interest

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