

FACTORS MOTIVATING HEALTHCARE WORKERS TO WORK DURING A PANDEMIC

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Authors' contribution:

- A. Study design/planning
- B. Data collection/entry
- C. Data analysis/statistics
- D. Data interpretation
- E. Preparation of manuscript
- F. Literature analysis/search
- G. Funds collection

Summary

Background. In the beginning of the COVID-19 pandemic, the government in Bulgaria and health authorities faced difficult problems. The challenges facing healthcare workers tested their professionalism and motivation to perform their professional duties.

Material and methods. In March 2022, a direct anonymous online survey was conducted with healthcare workers who were students in the "Management of Healthcare" master's program. The results were compared with results obtained in 2021.

Results. The fear of infecting loved ones is the factor with the strongest negative influence on motivation, followed by the reporting of new cases and the lack of effective treatment. A sense of professional and moral duty and job satisfaction were the main motivators for continuing to work during the pandemic. For motivation to work in a future pandemic, important conditions are additional pay, adequate number of staff and regular provision of protective equipment, as well as an increase in public trust in the health authorities.

Conclusions. Studying work motivation among healthcare workers is important for preparing society and dealing with future pandemics. Effective treatment and additional pay are motivating factors for work in a future pandemic.

Keywords: COVID-19, pandemic, motivation, workers, healthcare

Introduction

The motivation of the human resources in an organization is a key point for the effective management of any organizational structure. The motivational process is complex and continuous and is at the core of every person's activity, both personally and professionally [1,2].

In March 2020, life around the world was paralyzed by the pandemic situation. Bulgaria's declaration of a state of emergency created a number of challenges for healthcare workers [3]. Medical and healthcare workers were forced to deal with serious difficulties:

- working in conditions with a high risk of infection,
- lack of unified effective treatment,
- lack of personal protective equipment,

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- lack of respirators and devices for artificial pulmonary ventilation of patients,
- work in isolation and with uncomfortable protective clothing,
- work with inadequate pay and a huge shortage of personnel.

One year later, as a result of the development of the pandemic and the complicated situation in medical facilities, new trials and difficulties can be added for the "heroes of the front line", as the public called healthcare workers, namely:

- loss of colleagues and loved ones,
- mistrust in newly developed vaccines,
- public dissatisfaction with the imposed measures,
- strong stress and tension,
- efforts to preserve mental health.

Since then, a number of studies have been conducted on the impact of the COVID-19 pandemic on the mental health of nurses and other medical and healthcare workers, how they cope with the effects of stress and burnout, and their motivation to work.

According to literature, the leading cause of stress is "the loss of a loved one". This fact explains the increased level of stress in the post-recession years among healthcare workers. The relationship between the increased level of stress and the motivation to work has been established, namely that working under stressful conditions leads to reduced motivation and creates obstacles in their performance at work [3-5].

The factors to overcome stress, emotional exhaustion and conflicts with duties, such as seeing colleagues receive better financial compensation and family compensation in case of death at the workplace, were reported from healthcare workers as motivating factors in a future outbreak, as well [6].

Working in a low-stress environment and regular testing as well as additional financial incentives are some of the main motivating factors for work [7,8]. In the context of a pandemic, the satisfaction of lower-level needs such as physiological needs and safety affects feelings of satisfaction. But the authors focus on external stimuli in this critical situation. Ethical aspects of care are also the subject of research, in particular how ethical dilemmas affect the motivation to work in high-risk settings and the sense of professional responsibility, i.e., the duty to provide care [9].

Technological progress is particularly noticeable in medical practice, but the aggressive entry of new technologies creates "new types of moral problems" among medical workers. Such problems include, for example, alienation from the act of production in the labor process, and alienation from the act of medical action through the use of telecommunication technologies, which can vitiate the holistic approach to the patient [10]. Adherence to basic ethical principles such as fidelity and continuity of care has been further challenged in light of the COVID-19 pandemic. Despite difficulties such as fear, stress, and tension, nurses are highly motivated to provide care driven by the sense of professional duty to patients and to society as a whole [11].

Aim of the work

The aim of the study was to compare the motivating factors for healthcare workers to work during COVID-19 pandemic one year after and two years after the start of the pandemic.

Material and methods

A direct individual anonymous online survey with Google forms was conducted in March 2021 and in March 2022 with students studying in a master's program in the "Management of Healthcare" specialty in the Faculty of Public Health at the Medical University of Pleven in Bulgaria. A structured questionnaire with 12 closed questions was developed. The introduction included a brief explanation of the study and informed consent. A link to the questionnaire was sent to the student groups who at that time were studying in the university. Answers to the questionnaire were sent completely anonymously and were automatically received by Google Forms.

Analysis was performed via descriptive statistics and non-parametric test of hypothesis testing. Socio-demographic characteristics of participants were compared using chi-squared tests of homogeneity for categorical data. Calculations were made by SPSS v. 26 for Windows-based PCs. All results are statistically significant at $p < 0.05$.

Results

The survey was conducted in two stages, in March 2021 and March 2022, with the same anonymous questionnaire. Students enrolled in the Master's program (part-time) in the "Management of Healthcare" master's program hold a bachelor's degree in a different specialties and all of them work in different medical aid units. During the first stage of the survey, 87 students responded, and their distribution according to their bachelor specialty was as follows: 50 (57.5%) nurses, 22 (25.3%) midwives, 8 (9.2%) X-ray and medical laboratory technicians, paramedics 4 (4.6%) and 3 (3.4%) were rehabilitators or assistant pharmacists. Slightly more than half of the respondents had more than 20 years of work experience, and the rest were evenly distributed: 21 (24.1%) with work experience between 10 and 20 years and 21 (24.1%) with less than 10 years.

In the second stage of the survey (2022), there were 46 respondents and their distribution according to specialty showed again a predominance of nurses: 21 (45.7%) nurses, 7 (15.2%) midwives, 13 (28.3%) X-ray and medical laboratory technicians, 2 (4.3%) paramedics, and 3 (6.5%) were rehabilitators or assistant pharmacists. The distribution of respondents according to work experience showed that the largest relative share of healthcare workers – 64 (48.1%) – were those with more than 20 years of experience, followed by 35 (26.3%) with work experience between 10 and 20 years and by 34 (25.6%) who had less than 10 years of work experience ($\chi^2=13.098$, $df=2$, $p < 0.05$).

Respondents' answers regarding factors with a negative influence on their psyche during the pandemic were initially compared (Table 1).

Table 1. Factors with the strongest negative influence on the psyche of healthcare workers

Factors with the strongest negative influence	2021	2022	p-value
1. Worry about infecting loved ones	64 (73.6%)	42 (91.3%)	0.016
2. Reporting new cases of infected and deceased persons every day	48 (55.2%)	28 (60.9%)	>0.05
3. Lack of effective treatment	31 (35.6%)	19 (41.3%)	>0.05
4. Patients or colleagues dying from COVID-19 in front of your eyes	25 (28.7%)	14 (30.4%)	>0.05
5. A contradiction between a sense of responsibility and duty and the security of your own life	20 (23.0%)	9 (19.6%)	>0.05

Factors with the strongest negative influence	2021	2022	<i>p</i> -value
6. Uncomfortable protective clothing	17 (19.5%)	5 (10.9%)	>0.05
7. Caring for sick colleagues	11 (12.6%)	3 (6.5%)	>0.05
8. Exhaustion from the hours of overtime	9 (10.3%)	9 (19.6%)	>0.05
9. Infection from a patient you cared for	5 (5.7%)	0 (0.0%)	n.a.

Additional payment was not the most motivating factor for healthcare workers to continue to work in pandemic (Table 2). Our society should be proud that for these professionals, who are not sufficiently appreciated in our country, professional and moral duty is heeded and upheld, even when there is a serious risk to their life and health.

Table 2. The respondents' answers to the question: "What motivates you to continue working in the current pandemic conditions?"

Motivating factors to continue to work in a pandemic	2021	2022	<i>p</i> -value
1. A sense of professional and moral duty	69 (79.3%)	38 (82.6%)	>0.05
2. Job satisfaction	46 (52.9%)	27 (58.7%)	>0.05
3. Additional payment	33 (37.9%)	18 (39.1%)	>0.05
4. Provision of sufficient protective and protective equipment	16 (18.4%)	9 (19.4%)	>0.05
5. Provision of additional paid time off	7 (8.0%)	2 (4.3%)	>0.05

The lack of successful and effective treatment in the fight against COVID-19 and the hundreds of thousands of lives lost month after month has demotivated medical personnel, resulting in the challenge of maintaining hope not only among patients and their loved ones, but also among their colleagues (Table 3).

Table 3. The respondents' answers to the question: "What will motivate you to work in a future pandemic?"

Motivating factors to work in a future pandemic	2021	2022	<i>p</i> -value
1. Additional payment	53 (61.6%)	29 (63.0%)	>0.05
2. Effective treatment	50 (58.1%)	27 (58.7%)	>0.05
3. Provision of sufficient protective equipment	40 (46.5%)	26 (56.5%)	>0.05
4. Financial support for families of infected workers	27 (31.4%)	0 (0.0%)	n.a.
5. Reduced working hours	25 (29.1%)	13 (28.3%)	>0.05
6. Public and media support	14 (16.3%)	8 (17.4%)	>0.05
7. Availability of vaccines	12 (14.0%)	9 (19.6%)	>0.05
8. Family support	12 (14.0%)	9 (19.6%)	>0.05
9. No overtime	8 (9.3%)	8 (17.4%)	>0.05
10. Providing supportive meetings with psychologists	7 (8.1%)	5 (10.9%)	>0.05

Discussion

The majority of those surveyed in the first stage (83%) and nearly 76% of those surveyed in the second stage are categorical that they have not thought about leaving and changing their profession. Those who "had a similar thought" but rejected it were 12.6% (2021) and 17.8% (2022) respectively. The high level of professional responsibility and belonging to their professions are predominant among medical and healthcare workers and are permanent motivating factors in the performance of their duties regardless of the circumstances. The data prove the power of intrinsic motivation on human behavior, which in many cases is unconscious.

Various factors can affect the psyche of people during a pandemic, depending on the specific situation. Those who are on the front lines of the fight, who treat and care for the sick, are subjected to the greatest mental and physical impact. In the survey, the respondents identified the following factors as having the most impact on their psyche: worry about infecting loved ones; reporting new cases of infected and deceased persons every day; and the lack of effective treatment. The results showed that there is a statistically significant difference in the first answer ($p=0.016$). The concern of individuals about infecting those closest to them kept increasing as the pandemic persisted for more than two years and many lives were lost. It was clear that fear and helplessness in the face of the power of the unfolding pandemic, as well as the crushing anxiety of the unknown, were surging, and the pandemic had been difficult to bring under control. This helplessness, which the answers made evident, displaced the influence on the psyche of significant factors such as patients or colleagues dying from COVID-19 in front of one's own eyes and the contradiction between a sense of responsibility and duty and the security of their own life. The study by Mercado et al. showed that during the pandemic, healthcare workers suffered more health problems associated with higher stress and burnout symptoms. This led to lower quality of work life due to higher burnout symptoms and turnover intention [12].

As can be seen from the results in Table 2, the differences in the relative shares of the motivating factors, such as the degree of their importance, are very small and are preserved in the answers one year later. First of all, the sense of professional and moral duty is a major motivating factor in both surveys ($n=69$, 79.3% for 2021 and $n=38$, 82.6% for 2022). The data again prove the importance of perceived intrinsic motivation in the performance of professional duties among healthcare workers, which is of utmost importance for the socially significant role of medical specialties.

Slightly more than half of the respondents indicated "job satisfaction" as a motivating factor for working in pandemic conditions, which confirms the non-commercial choice of a profession with core values: unconditional dedication, charity, and care for every person. The beginning of the pandemic coincided with the shortage of human resources and continuous changes in the healthcare system in our country. At the time, nurses and other healthcare workers conducted effective strikes, demanding better working conditions and better pay. The onset of the pandemic, regardless of their demands for changes, proves their dedication to duty, and high degree of professionalism and sense of moral responsibility to the life and health of the entire society. The healthcare workers are internally motivated to serve and to care for ill people during pandemic. A study with in-depth interview in Nepal found "three major factors that motivated the healthcare workers: 1) Always remembering oneself as a Health worker (Doctor/Nurse), 2) Commitment to the hospital and 3) Own ethics that one has to serve" [13].

The data from the two surveys are roughly the same regarding the motivating factors that matter to them when working in pandemic conditions. According to more than a third of the respondents, additional

payment as compensation for assuming a high risk of infection and illness is a significant incentive for increased motivation to work, especially against the background of the general inadequate pay for healthcare workers in our country. Far fewer individuals indicated "provision of additional paid time off" as a motivation-enhancing incentive (8.0% – 2021, 4.3% – 2022), indicating that this measure does not significantly influence healthcare workers' motivation to fulfil their official duties.

In a qualitative study from 2022 about work motivation and performance during the COVID-19 pandemic among Indonesian nurses in Qatar, the first three motivating factors were good financial support, leadership support and personal protective equipment support. In the last place they indicated work obligations and professional obligations [14]. In another study in a hospital in Japan, "the feeling of being protected by the hospital was the only factor that significantly decreased hesitation and increased motivation to work" [15]. The sense of feeling protected by the hospitals was a motivating factor, and was so as well for healthcare providers in Pakistan, where "fear of infection, increased working hours, and inadequate support of the workplace played a key role in escalating the hesitancy among healthcare workers to perform their duties" [6].

Of interest is the opinion of the respondents, as one of the largest professional groups directly involved in the treatment of patients, regarding the motivation to work in a future pandemic. The comparison of the answers in the two stages of the survey show that there is no significant difference in the ordering of the factors affecting their motivation for professional activity. The data proves that additional pay was indicated by 33.9 % (2021) and 39.1% (2022) of the respondents as third motivating factor during the COVID-19 pandemic, but in future similar situations, according to 61.6% (2021) and 63.0% (2022) persons included in the study, the financial reward adequate to the situation occupies the first place among the factors that increase motivation (Table 3). This fact is in accordance with the desire, expressed for years by healthcare workers in the country, for adequate and dignified payment for their work [16,17]. In many cases, intrinsic motivation is much stronger than extrinsic motivation, but in such a created situation, external incentives are definitely a factor of greater importance for motivation. Findings in a study by Karaferis also showed a slight predominance of extrinsic motivators such as salary, organizational policies and job security as well as the need to improve these factors in period of crisis [18].

It is common knowledge that low compensation is one of the main reasons for reducing interest in the profession and its deteriorating image in society, and in conditions of increased risk to life and health, it is logical that healthcare workers expect additional pay.

Different reasons such as the lack of successful and effective treatment in the fight against COVID-19 and the hundreds of thousands of lives lost for months on end have demotivated medical personnel. Therefore, effective treatment and availability of vaccines in the conditions of a future pandemic situation are also motivating factors for workers.

It is no surprise that as the third most influential motivating factor, respondents put "the provision of sufficient protective equipment for workers" (Table 3). At the beginning of the pandemic, ensuring personal protective equipment was a serious challenge for those working in healthcare, but also for our entire public, which led to a number of protest actions. Over time, the difficulties in the supply of protective equipment were overcome. With the help of the managers at the national level and the activation of a number of production organizations, the needs for protective clothing and the necessary personal protective equipment were provided in the necessary quantities. The unification of our society's efforts in pandemic conditions was demonstrated in a number of ways – donor companies provided protective equipment and

hot food for the staff on duty in medical facilities; grateful patients and their relatives glorified the work of "frontline workers" through poems, paintings, songs and expressions of gratitude on social media. All these community activities kept the workers in white coats motivated to continue caring for people despite the difficult circumstances.

Nearly $\frac{1}{3}$ of the surveyed individuals identified financial support for the families of healthcare workers infected at work, as well as reduced working hours, as motivating factors in pandemic conditions. Respondents gave appropriate acknowledgement – 16.3% (2021) and 17.4% (2022) – to "public and media support" among the various motivating factors. The increase in the relative share in the second stage of the study can be explained by the difference in priorities for people when working in conditions of stress and overload.

It is impressive that only 8.1% (2021) and 10.9% (2022) of the persons included in the study are of the opinion that psychological support is a motivating factor in the presence of difficult circumstances. Regardless of the serious consequences on the psyche and emotional stability of individuals, especially those working "on the front line", as shown by data from a number of international scientific studies, psychological support is still insufficiently evaluated among healthcare workers in our country, especially in terms of its quality and as a motivating factor.

Conclusions

Motivation is a key aspect in any human activity. Its main characteristics are complexity, individuality, changeability, and that it is multifaceted. For healthcare workers, the main motivating factors are different depending on whether they are, or are not, dealing with a pandemic.

The results of the conducted study confirm the theoretical statements about motivation, emphasized in McClelland's content theory about the need for achievement and Vroom's procedural theory about expectation.

Regardless of the generally accepted perception of the power of the financial incentive, for more than half of the surveyed persons, the main motivating factors in conditions of initial stress (at the beginning of the pandemic) are the sense of professional and moral responsibility, and job satisfaction.

The public evaluation and recognition of the work done is of essential importance for the fulfilment of the professional and moral duty of the Bulgarian medical and healthcare workers.

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