What effect of work overload on the mental and physical health of health personnel during the covid-19 pandemic crisis: case of the TATA Hospital Center and the MOULAY RACHID Casablanca Hospital Center. HIMMOUCHE Naoufal

What effect of work overload on the mental and physical health of health personnel during the covid-19 pandemic crisis: case of the TATA Hospital Center and the MOULAY

RACHID Casablanca Hospital Center.

HIMMOUCHE Naoufal Higher Institute of Health Sciences Maroc Naoufal.himmouche@uhp.ac.ma

submission date: 01/03/2022 Accepted date: 11/03/2022 published date: 17/04/2022 Abstract:

The study of the effect of work overload on the mental and physical health of health personnel during the pandemic crisis is the main subject of this research.

A descriptive study was carried out on a sample of 98 health personnel from two provincial hospitals: CHP TATA and CHP MOULAY RACHID CASABLANCA, the data was collected via a questionnaire during the period from 24/05/2021 to 31/05 /2021.

The results of our study show that 55% of health personnel have neurovegetative disorders. Similarly, it has been revealed that the effect of stress also causes cognitive and sleep disorders, the work overload therefore negatively impacts the mental and physical health of health personnel during the health crisis.

1- Keywords: Work overload, Stress, Burn-out, Addiction

Résumé

L'étude de l'effet de la surcharge de travail sur la santé mentale et physique du personnel de santé durant la crise pandémique fait l'objet principal de cette recherche.

Une étude descriptive a été réalisée sur un échantillon de 98 personnels de santé de deux centres hospitaliers provinciaux : CHP TATA et CHP MOULAY RACHID CASABLANCA, les données ont été collectées via un questionnaire durant la période allant de 24/05/2021 à 31/05/20

Les résultats de notre étude montrent que 55% des personnels de santé présentent des troubles neuro-végétatifs. De même, on a pu révéler que l'effet du stress engendre aussi des troubles cognitifs et du sommeil, la surcharge de travail donc impacte négativement la santé mentale et physique de personnel de santé durant la crise sanitaire.

4- Mots-clés: surcharge de travail, Stress, Burn-out, Addiction.

Introduction:

The COVID-19 pandemic or SARS-Cov 2, spread rapidly throughout the world from January 2020, Covid-19 had a significant psychological impact on the entire population, filling overwhelmed hospitals by the massive influx of patients with severe forms of the disease, resulting in a dramatic increase in mortality within the healthcare services.

The indirect challenges of such a pandemic in terms of mental health are at least twofold: the potential psychological impact of confinement on the population and an impact on health personnel.

Front-line health personnel face many difficulties, such as direct exposure to patients with a high viral load, exposure to the risk of contamination, physical and moral exhaustion, reorganization of workspaces, adaptation to rigid work organizations, management of the shortage of materials, the unusually high number of deaths among patients, colleagues or relatives, ethical issues relating to decisionmaking in a healthcare system under strain. They sounded the alarm and some died of the disease, like Li Wenliang, one of the first Chinese doctors to warn of the dangerousness of COVID19.

In this sense, we are interested, in the present contribution, to elucidate the effect of work overload on the physical and mental health of health personnel during this pandemic crisis and our problem is announced as follows: how the health personnel able to manage their physical and mental health during the crisis and during lamentable working conditions, namely overwork case: CHP TATA and CHP MOULAY RACHID Casablanca, Morocco?

To study this problem, other questions are necessary: Is it true that the overload of work threatens the physical and moral health of health personnel? Does the covid19 pandemic negatively impact the mental and physical health of healthcare workers? Can work changes during this pandemic crisis lead to the appearance of risks to the health of health personnel? Can we say that psychological support is important for the well-being of health personnel during this health crisis?

To provide answers to these questions, we opted for a quantitative descriptive study using a questionnaire that fits into the framework of elucidating an inventory of the slides involved in the COVID 19 health crisis.

Conceptual details:

In order to answer our research question, we tried to understand the concept of work overload during the pandemic crisis, which brings together several professional risks that affect the physical and psychological integrity of health professionals and can alter performance. of the organization, then, we will try to elucidate an inventory of fixtures of the effect of the overload of work and its consequences on the mental and physical health of the personnel of health through the realization of a prospective survey near the nurses, doctors, radiology technologists and laboratory technologists, within the two provincial hospital centers (CHP CASA, CHP TATA).The primary purpose of this survey is to examine and assess the effect of work overload on healthcare personnel during the pandemic crisis.

Indeed, and according to the latest European survey on working conditions, workers in the health sector (e.g. nurses, doctors, etc.) were exposed to the highest levels of work intensity, which which affects aspects of productivity and business continuity (Eurofound, 2019).

The resulting situation of COVID-19 has only aggravated and multiplied the presence of risk factors in this population which is already suffering from a high dose of stress. Health professionals are currently facing a huge mental burden as has happened in other epidemics such as SARS or the Ebola crisis. (Huang et al, 2020), thus, the acute stress of the professional in the face of this crisis can evolve in many cases into posttraumatic stress (Cai et al., 2020).

Another study focused on studying the impact of the COVID19 pandemic on healthcare personnel, in terms of stress in two hospitals in France. This survey revealed that the rehabilitated working conditions generated an increase in physical fatigue for 62% of these staff. Moral exhaustion was also reported with a rate of 36%. In short, 72% of those questioned said they were afraid of being infected. Added to this, the fear of infecting loved ones is greater with a rate of 90% of those questioned and, testifying to the stress and guilt of potentially being the vector of the disease by transposing it from the professional environment to the home environment. (Georger, F. et al 2020)

Finally, many frontline workers are away from their families, and some cannot see their spouse and children due to the long working hours.... Others have been quarantined to avoid infecting their families. This situation can also increase conflict between work and family. Moreover, this situation not only affects individuals, but also the work team aspect; the high stress situation can lead to interpersonal conflicts between colleagues. (Greenberg et al, 2020). In what follows, we will approach the key concepts of our research, in particular work overload, stress, burn-out and addiction, which threaten the well-being of workers in the health sector.

1) <u>An approach to work overload:</u>

Work overload is an excessive aggregate of responsibilities for a single agent, without the latter having enough time to perform his usual task. This workload can give the impression of being overwhelmed and no longer having control over one's experience. In the context of the pandemic, we have observed that health personnel have extended their working hours without recovery, which has had serious consequences on their mental health.

Work overload can be quantitative when it designates too high a workload in relation to the time and resources available and beyond that it can impact the physical health of the agent, or qualitative, when it means too high demands in comparison to the skills of the individual and thus the overload of work can threaten the mental health of health personnel (Girard, 2009).

1.1. For the impact of work overload on physical health:

The repercussions of the pandemic on the physical health of health personnel had a detrimental effect, especially with regard to musculoskeletal disorders, chronic fatigue, reduced alertness and a change in mood, due to an increase in number of patients and long hours of work, especially during intensive care, which sometimes leads them to feel this powerlessness towards the situation or even loss of control and all this can negatively impact the physical health of said staff. Beyond that, this factor will also have repercussions on the rate of absenteeism which is accentuated and a deterioration in productivity and thus, create a bad social climate within the institution.

1.2. For the impact of work overload on mental health:

Work overload can also be part of the damage leading to professional exhaustion, often called burnout, depersonalization, great emotional exhaustion, depression and psychological distress, etc. Among the factors leading to this state, we can note the general work situation, job insecurity, lack of prevention, lack of time management, lack of recognition of the efforts made within the work, the feeling of loss of control over the task to be accomplished as well as weak institutional communication. So, and in what follows we will try to approach the concept stress first and then the bun-out.

2) <u>An approach to stress at work:</u>

According to Elisabeth Grebot and Marc Dovero in the book "the professional stress how to cope": Stress at work often arises when there is a distortion between the perception that an agent has of the constraints imposed on him by his work environment and the perception that he has the skills to deal with it. Stress is triggered when a threat is perceived and allows the body to face it (Selye, 1975). Stress is an adaptive function that mobilizes the physiological resources necessary for fight or flight (Cannon, 1932). In our case, the stress generated by the COVID-19 pandemic came in already dismal working circumstances for health personnel and this because of the particularity of the care profession and we notice it in the intensification of the hourly load, the phobia of contracting the virus, lack of recovery time at work, as well as a weak moral and socioeconomic

support for the benefit of the health personnel.

3) <u>An approach to professional exhaustion or burn-out:</u>

The name of professional exhaustion is especially known under the English name 'Burn-out' according to the World Health Organization (WHO), is characterized by a great intense weariness, panic at work and an inability to carry out tasks. convincing results.

According to Brill: "Burnout is a dysphoric and dysfunctional state exclusively caused by work in an individual presenting no psychopathology, who has, for a long time, provided adequate performance in the same job and who will no longer be able to reach the same level. without outside help or job change." (Brill, PL 1984)

In this pandemic crisis, healthcare personnel are particularly at risk of burnout. Burnout is the result of chronic work-related stress that makes us feel physically and emotionally drained and uninterested in our work. This denier can lead to serious consequences such as addiction for example.

4) <u>An approach to addiction:</u>

The WHO defines addiction as "a state of periodic or chronic dependence on substances or behaviors". Addiction is a pathology affecting decision-making power, emotional balance, voluntary control of behavior not only in cases of consumption of psychoactive products but also in behavioral addictions. Social environment, developmental stages and genetic factors are closely related to vulnerability to addiction.

In this period of pandemic crisis and what has been observed is that social isolation, work tension promote addictive behavior and aggravate the dependence of health personnel on tobacco, overconsumption of alcohol, psychotropic drugs to try to reduce anxiety and depression at work.

Methodology

A methodological approach:

In order to provide some answers to the questions we asked ourselves in the introduction, we have opted for a questionnaire intended for health personnel who are in direct contact with the pandemic and who take care of patients affected by COVID19. , this method makes it possible to collect information from participants in a limited time, in a rigorous manner and in a confidential and anonymous manner. The corpus includes both CHP Casablanca and CHP TATA with 120 questionnaires that were distributed and 98 were collected.

- The questionnaire data is coded, entered and analyzed by IBM SPSS STATISTICS Version 25 and MICROSOFT EXCEL 2016 software.
- Quantitative variables were described by means and variances.

Results:

The quantitative analysis allowed us to support and explain the results obtained through the use of the SPSS and Excel software and their structured operations which make it possible to obtain reliable results as for their significant contents, however, we want to relativize the conclusions of this study whose sample is relatively representative.

The analysis structure will follow the following plan: initially, we will study the constituents of our corpus, in particular: the risk factors faced by health personnel during the health crisis. Secondly, we will focus on the effects of this pandemic crisis on the physical and mental state of our sample. Thirdly, we will list the consequences of these risks on the smooth running of our sample, in particular in the two hospitals?

Concerning socio-demographic variables

This question will shed light on the age, gender and place of residence of our sample. Indeed, we note on these first variables that the majority of our studied population is predominantly female with a percentage calculated on the sum of the two groups at 68.9% of the 98 people who were surveyed. In addition to this, the population studied remains younger in TATA than in Casablanca, on average, the staff of the CHP MOULAY RACHID fluctuates around 33.68 years \pm 11.18 years with therefore a maximum age of 59 years and minimum of 22 years, while, CHP TATA staff fluctuates around 29.09 years \pm 8.524 years with an upper limit of 57 years and a minimum age of 20 years.

Another observation that we have detected and still during this health crisis, is that even if a cluster in the TATA group of people living alone with a rate of (28.3%), but the majority of health personnel from the two centers, resided with family with two respective rates CHP Casa 77.8% and CHP TATA 52.8%. As an interpretation of these first variables, we can say that it is a relatively young sample that constitutes the first line of defense against the pandemic, but it also has a major concern is to protect their loved ones especially knowing the risks in which the latter evolved.

Concerning the variable of the specialty of health personnel:

This second variable will tell us about the specialty of each hospital group. Indeed, both groups contain mainly general-purpose nurses, doctors, laboratory and radiology technologists.

Regarding the CHP MOULAY RACHID Casa, the sample studied is divided into general-purpose nurses with a rate of 68.9%, doctors with a rate of 15.6%, laboratory technologists with a rate of 11.1% and radiology technologists with a rate of 4.4%. And concerning the CHP TATA, the sample studied is divided into 58.5% general-purpose nurse, 11.3% doctor, 7.5% laboratory technologist, 7.5% technologist radiology, 9.4% anesthetist and 1.9% pharmacist, 1.9% mental health nurse and finally 1.9% dietitian nutritionist. What we can deduce from this is that our sample is strictly health with various specialties and which is in direct affront with the sick cases and the pandemic situation in general.

Regarding the variable of the physical and mental state of the staff:

This variable will tell us about the state of physical and mental health through the activities he maintains to preserve his balance during the pandemic crisis.

Indeed, the staff of the CHP Casablanca is relatively sporty with a rate of 52.8% and practiced at least one sporting activity during this period, while the staff of the CHP Tata shows a rate of 37.8% of sports practitioners during this period. always the same period. Added to this, we noticed that almost half of the health personnel with respective rates of 48.9% at CHP casa and 54.7% at CHP TATA practiced regular leisure activities such as reading, writing, travel and dance, and beyond that, regular mental relief remains mainly favored over sports activities.

But what we have also observed is that the psychosomatic effect of workrelated stress and the chronic pathologies reported have the same trend in the two groups studied, because at the CHP MOULAY RACHID Casa, more than half with a rate 64.4% of health personnel affirmed the presence of psychosomatic symptoms of work-related stress and 42.2% of health personnel affirmed having chronic pathologies. While at the level of CHP TATA 90.3% of health personnel affirmed the presence of psychosomatic symptoms of work-related stress, and 19.3% affirmed to have chronic pathologies reported. As an interpretation of this variable,

<u>Regarding the variable of work-related stress risk factors during the pandemic crisis:</u>

This variable will inform us about the most dominant risk factors in the event of work-related stress during the crisis and in particular those relating to the smooth running of the work. Indeed, several factors favor job dissatisfaction. In the results we obtained, the lack of materials is the most remarkable factor with a rate of 66.7% among the respondents of the CHP CASA and 69.2% among the respondents of the CHP TATA, followed by lack of training with a rate of 54.2% at CHP CASA and 73.1% at CHP TATA and finally the lack of accountability of health professionals with a rate of 50% at CHP CASA and 26.9% at CHP TATA.

In addition to this, is that the plurality of staff has seen the organization of their work modified since the start of the covid19 pandemic declaring at least one change. The three most reported types are manifested by a change in activity, an increase in the number of hours worked or a change in services. Indeed, the change in activity to care for covid-tested patients was 66.7% at CHP CASA and 58.5% at CHP TATA. Regarding the shift to night shift 11.1% at CHP CASA and 13.2% at CHP TATA. Regarding the increase in the number of working hours 40% at CHP CASA and 47.2% at CHP TATA and finally the change of service 53.3% at CHP CASA and 45.2% at CHP TATA.

Among the risks that our sample also experienced is that it contracted the disease with a disparity in the two populations, because the rate of people who already had covid at the CHP MOULAY RACHID Casa was 44.4%. against 17% of CHP TATA staff have already had COVID19. This disparity can be explained by the high rates of contamination that was observed in Casablanca during the peak of the disease. As an interpretation of this variable, we can deduce that the staff is really confronted with a lot of risks that threaten their health but also the smooth running of their work, especially in the absence of a prevention policy in such unpredictable health situations.

<u>Regarding the variable of security measures put in place against</u> <u>COVID19:</u>

This variable will provide us with information on compliance with the measures taken to deal with this pandemic, including the two most basic safety measures, wearing a mask and using hydro-alcoholic gels.

Indeed, we observed that 93.3% of CHP CASA health staff and 92.5% of CHP TATA health staff used hydroalcoholic gels. In addition, 91.1% of CHP CASA health staff and 90.6% of CHP TATA health staff used the mask. What we also noticed is that the wearing of the overcoat was also respected because the majority of the staff in the two groups and practice it on a daily basis with respective rates of 60% at CHP CASA and 64.2% at CHP TATA.

According to our survey, we observed several perceptions relating to the infection and the risk of transmission, where most of the health personnel with a rate of 91.1% at CHP CASA and 80.4% at CHP TATA were afraid transmit COVID19 to their loved ones. In addition, 53.3% at CHP CASA and 35.3% at CHP TATA were afraid of catching COVID19 when going to work and 40% at CHP CASA and 41.2% at CHP TATA of respondents feel more vulnerable to to COVID19 due to their professional activity.

As an interpretation of this variable, we can say that both populations take the dangerousness of the disease seriously and take the necessary measures to protect themselves and those around them even if they feel vulnerable to it, which threatens their own health and the health of their loved ones.

<u>Regarding the variable of the consequences of the pandemic state on</u> <u>the health of our sample:</u>

This variable will provide us with information on the observed effects of the pandemic crisis on the health of the staff of the two centres. Indeed, and as we have already underlined, the results we obtained show that the agents of the two hospitals presented chronic illnesses caused by work during the pandemic crisis. Added to this, is that the majority of participants with respective rates of 55.9% at CHP CASA and 36.8% at CHP TATA used psychotropic drugs as addictive behaviors for therapeutic purposes.

At the level of the two CHPs, we noticed that most of the respondents consumed

- Analgesic drugs with rates of 61.1% at CHP CASA and 59.4% at CHP TATA).

- Antispasmodics with rates of 22.2% at CHP CASA and 12.5% at CHP TATA.

- Gastric dressings with rates of 63.9% at CHP CASA and 28.1% at CHP TATA.

- Other drugs with rates of 5.6% at CHP CASA and 6.2% at CHP TATA.

Added to this is that 26.3% at CHP CASA and 10.5% at CHP TATA saw increased tobacco consumption, and 26.3% at CHP CASA consumed alcohol.

In addition to the addictive behaviors manifested in our populations, we observed that at the CHP MOULAY RACHID Casa level, that work-related neuro-vegetative disorders in this pandemic crisis reported by 58.1% of health personnel, a fairly similar rate of 50.9% was presented by CHP Tata staff.

Among people with neurovegetative disorders at CHP CASA, 48.1% experienced palpitations, pain in the heart with a rate of 25.9%, nausea with a rate of 22.2%, chest tightness with a rate of 29.6%, digestive disorders with a rate of 44.4%, sweating in the absence of exertion with a rate of 25.9%, musculoskeletal disorders with a rate of 44.4%, signs of nervous tension with a rate of 14.8%, headaches at the end of the day with a rate of 74.1%, feeling unwell with a rate of 29.6%, depressive states with a rate of 37% and finally mood disorders with a rate of 59.3%.

While in the CHP TATA, 37% were palpitation type, 26% pain in the heart, 7% nausea, 11% chest tightness, 41% digestive disorders, 15% sweating in the absence of effort, 51.9% mood disorders.

We also observed that among the consequences of this pandemic on the health of our sample, it was that it had an effect on sleep and thus leading to attention disorders in both groups with:

- Difficulty falling asleep with rates of 40% at CHP CASA and 26.5% at CHP TATA)

- Mid-night insomnia with rates of 48.9% CHP CASA and 22.7% at CHP TATA

- The feeling of not having slept with rates of 26.7% at CHP CASA and 15% at CHP TATA.

Finally, the serious consequence that we have detected in our work is the following: because of the colossal workload, the staff of the CHP MOULAY RACHID Casa experienced during the crisis period, three cases who really had suicidal thoughts. As an interpretation of this variable, we can deduce that the consequences of this crisis on the health of the staff of the two centers were serious, especially in the presence of effects such as neuro-vegetative disorders and the manifestation of addictive behaviors, which had the consequence to cause some people to think about suicidal behavior.

<u>Regarding the variable of the effect of Work overload on</u> <u>performance:</u>

This variable will inform us about the effect of the work overload on the performance of our studied population and in particular on its rate of absenteeism and productivity.

In the CHP MOULAY RACHID Casa, 51.1% of health personnel said that work overload and stress can increase absenteeism and accentuated the turnover rate, a fairly similar rate was presented by health personnel in the CHP Tata with a rate of 51.1%.

In the CHP MOULAY RACHID Casa, 84.4% of health personnel thought that work overload can contribute to a drop in the level of

productivity, while the rate remains almost the same in the CHP TATA with 81.1%. As an interpretation of this variable, we can deduce that the work overload also negatively impacts work performance and can also lead to accentuating absenteeism rates and beyond creating dysfunction in health institutions.

<u>Regarding the variable of the role of psychological support during the pandemic:</u>

This variable will inform us about the role of psychological support in preventing and supporting the physical and mental health of health personnel.

From the results obtained, we found that most of our sample did not receive real psychological support and that only 11.1% at CHP CASA and 7.5% at CHP TATA claim to receive professional support from the share of those around them, in addition to 31.1% at CHP CASA and 24.5% at CHP TATA say that they felt valued and thanked for their role by the population with respective rates of 31.1% to CHP CASA and 41.5% to CHP TATA.

As an interpretation of this variable, we can say in the absence of real moral and psychological support, health personnel suffer in silence and beyond that their situation worsens at work and suddenly this situation can lead to serious consequences such as those which we raised above.

Discussion:

In short, hospitals that have grasped the importance of the health aspect of healthcare personnel and established a preventive policy, reap the benefits during crises, in particular that of Covid-19. The purpose of this survey was to carefully monitor the effect of the work overload on the physical and mental health of the health personnel of the CHP MOULAY RACHID Casa and the CHP TATA for a double challenge, both professional and human.

Mobilizing resources to deal with such a disaster is an existential necessity. However, the Kingdom of Morocco has shown some wisdom in terms of measures to mitigate the impact of this period, except for health personnel, who despite everything have experienced an extraordinary workload. Indeed, the study shows that most health professionals feel vulnerable because of their profession and worried about their own health and that of their loved ones, this being explained by the fact that health personnel have been destabilized by the dangerousness of the virus.

Such a period imposes psychological support to the interveners. It is therefore necessary to implement corrective actions by the authorized authorities, for frequent support and control of the mental state of the individuals concerned,

Statistics confirm the undeniable effect, whether moral or physical, of work overload on the health of healthcare personnel. Indeed, the results showed that the state of stress and burnout among health personnel during the health crisis manifests itself in the form of acute and chronic health problems, which have psycho-physiological and psychological effects. , as well as behavioral changes where most health personnel often adopt compensatory behavior with psychotropic drugs, then an increase in the percentages of drug consumption was observed at the level of the two CHPs to cover a high level of professional performance and to reduce anxiety load.

The effect of stress also causes cognitive disorders and sleep disorders, including disturbance of concentration, memory, difficulty falling asleep and middle-of-the-night insomnia. The results obtained show that the percentages of these disorders are high, this is explained by the increase in work tension and sometimes by traumatic situations where they have to face difficult decisions to be made and unprecedented mortality rates. , this partly explains the presence of addictive behavior or psychosomatic or somatic manifestations considered as a constituent element of Burn Out.

Our survey revealed that among the factors of work-related stress during this period of crisis is the inevitable work tension. We also find that low decision latitude and high psychological demand favor a passive life and low social support. All of this could have very dangerous and extreme symptoms such as suicidal ideation, in particular the three cases detected in the CHPC who suffered a very high workload tension.

Our results showed that work overload and stress can abruptly change several work indicators, namely: an increase in absenteeism, a drop in the level of productivity, the fear of making medical errors and an increase in conflicts in the workplace. the work team. Indeed, the deterioration of relations in the workplace leads to an increase in aggressive behavior and forms of violence, such as moral harassment between staff and causes an increase in the level of anxiety, burnout and post-traumatic stress.

All the results presented above confirm our hypotheses. The work overload during the COVID19 pandemic crisis has a negative impact on the mental and physical health of the health personnel of the CHP MOULAY RACHID CASA and CHP TATA, in particular the changes in the organization of work which induce risk factors to be taken at the serious and in consideration to guarantee the well-being of health personnel especially during this health crisis.

Conclusion

To conclude, the COVID-19 pandemic is a real health and social crisis that is subjecting the general population to significant psychological pressure. The health sector is the most affected by this crisis. People working in health systems are currently playing a key role in the global fight against COVID-19, special measures must be taken to support and protect these human resources. In the long term, this tragic health crisis should significantly improve our understanding of the mental and physical health risk factors of healthcare professionals.

This study is part of a perspective to elucidate an inventory. Indeed, the COVID-19 crisis has increased the risks for occupational health personnel. The pressure exerted on health personnel has caused various effects: exhaustion syndrome or Burn-out, anxiety, depression, stress, cognitive disorders, sleep disorders, post-traumatic stress and in extreme cases suicide. Mental health problems can reduce performance, lead to absences, increase staff turnover linked to the departure of health professionals.

All of these behaviors are likely to have a greater effect on longterm physical and mental health and adversely affect performance at work. Several levers in the sector are therefore likely to be weakened because of these human issues.

Support measures aimed at preventing or managing stress and mental health problems must be an integral part of confronting Covid-19, primarily and urgently targeting healthcare personnel. Certainly, the WHO is developing several tools dedicated to mental health in the workplace in this context of the COVID-19 pandemic. However, psychological support is an important factor in acting directly on the health and well-being of people, to cope with stress, reduce its adverse effects and also improve job satisfaction.

Thus, and like any scientific research, the results obtained in the present study show their limits and deserve to be developed and deepened. Firstly, we wanted to have a larger sample, more particularly with regard to hospitals to better represent the results and beyond to extend it to several regions of Morocco. Then, the duration of the study did not allow interviews to be conducted with officials at the level of the Ministry of Health to have as much vision on the subject from an internal and deeper point of view and suddenly, the time of carrying out our investigation was insufficient to analyze all the variables claimed to conduct more bivariate analyses. What effect of work overload on the mental and physical health of health personnel during the covid-19 pandemic crisis: case of the TATA Hospital Center and the MOULAY RACHID Casablanca Hospital Center. HIMMOUCHE Naoufal

Finally, our study was unable to assess more deeply all the factors impacting the physical and mental health of health personnel, hoping to deepen it in future studies but also to bring more interest to the psychological support component which gave proven to be the most important tool to deal with any kind of emerging crisis.

References and Referrals:

- Brill PL, 1984, The need for an operational definition of burnout, Family and Community Health, Flight. 6, No. 4, Professional Burnout, 12-24 (13 pages), DOI:<u>https://www.jstor.org/stable/44952633</u>
- Cai Y et al., 2020. Study on tensile compressive asymmetry in creep aging behavior of Al–Cu alloy under different stress levels, Journal of Alloys and Compounds, Volume 843.
- Cannon WB, 1994, Reflections on the man and his contributions,<u>International Journal of Stress Management</u>, 1, pages 145–158, DOI:<u>https://doi.org/10.1007/BF01857608</u>.
- Elisabeth Grebot and Marc Dovero, 2005, how to deal with professional stress, Ed. Broché, 267 pages, Paris.
- Eurofond: Publications Office of the European Union; Luxembourg, 2019. Working conditions and workers' health. Available at: https://link.springer.com/chapter/10.1007/978-3-030-18103-1_7
- Georger, F., Dos Santos, E., Gazagne, L., Berdagué, P., Saib, A., Nahon, S., ... Amara, W. (2020). VOC IMPACT: analysis of the different stress factors of hospital staff in 2 hospitals in France during the COVID-19 pandemic. Annals of Cardiology and Angeology. DOI:10.1016/j.ancard.2020.09.005.
- Girard D, 2009, Conflicts of values and suffering at work, The Public Ethics Review, p. 129-138, DOI:<u>https://doi.org/10.4000/publicethics, volume119.</u>
- Greenberg N et al, 2020, Managing mental health challenges faced by healthcare workers during covid-19 pandemic, The BMJ, doi:<u>https://doi.org/10.1136/bmj.m1211</u>, Volume 368
- Huang L., Miang Xu, Rong Liu H., 2020, Emotional responses and coping strategies of nurses and nursing students during the COVID-19 outbreak. medRxiv. 2020 doi: 10.1101/2020.03.05.20031898
- Selye H, 1975, The stress concept, **Canadian Medical** Association,115(8): 718