

The Experiences of Endoscopy Staff during the Covid-19 Pandemic: A Qualitative Study

Rakotomaharo M^{1*}, Razafindrakoto DE¹, Rabenjanahary TH², Noniarilala V³, Razafimahefa SH¹ and Ramanampamonjy RM²

¹Department of Endoscopy, Andrainjato University Hospital Center, Fianarantsoa, Madagascar

²Department of Gastroenterology, Joseph Raseta Befelatanana University Hospital Center, Antananarivo, Madagascar

³Department of Communication, Andrainjato University Hospital Center, Fianarantsoa, Madagascar



***Corresponding author:** Mialitiana Rakotomaharo, Department of Endoscopy, Andrainjato University Hospital Center, Fianarantsoa, Postal Code 303, Madagascar.
Tel : +261-346071399; E-mail: mialitiana.rak@gmail.com



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Abstract

Background: The health crisis due to the coronavirus is causing psychological impacts to health workers, especially those who are exposed on the front line such as endoscopy staff. The objective of this study is to describe the experiences of these personnel after resumption of endoscopic activities during the COVID-19 pandemic.

Materials & Methods: This study is based on individual interviews on semi-structured questionnaires centered on and concerning all the staff of the endoscopy department of the Andrainjato Fianarantsoa University Hospital Center in Madagascar. A qualitative design was developed for our study. The interview explored open questions: reactions to the onset of the disease, the main preoccupations, adaptation to different protective measures, opinion regarding the new work protocol, changes perceived by each person since resuming work activities, opinions on the use of individual protective equipment, feelings on the first day of work and after several months of work, and possible problems with sleep, current life satisfaction, addiction, and alimentation.

Results: Reactions to the pandemic were dominated by fear, worry, and anger. Family and loved ones were the main concerns. The staff has undergone changes in their work in the face of the new organization of the hospital, including the new protocol and protective materials. These changes, considered essential, were a source of fatigue and stress for the staff. However, we have noticed an adaptation to these changes as the work progressed. Signs of mental health disorder should be assessed in staff with changes in sleep, addictions or diet.

Conclusion: The use of personal protective equipment may have alleviated the fear about the risk of contamination of the disease by endoscopy. An evaluation of the psychological disorders on these personnel during and after the disease would still be helpful.

Introduction

In January 2020, the World Health Organization declared the outbreak of a new coronavirus disease, COVID-19, which was a public health emergency of international concern [1]. Worldwide, in April 2020, there were 2,471,136 confirmed cases and 169,006 deaths [2]. In Western countries, 10% of health workers have been affected by the disease [3]. This health crisis had psychological impacts on health professionals' especially front-line healthcare worker [4]. Upper gastrointestinal endoscopy is considered as a high risk procedure for transmitting coronavirus [5]. We carried out this study because the health of nursing staff is crucial in the continuity of care and there has not yet been a study carried

out on the mental health of endoscopy staff during the COVID-19 pandemic [6]. The objective of this paper was to describe the experience of endoscopy staff upon resumption of endoscopic activities during the COVID-19 pandemic. It is necessary to know these mental health problems on the health professionals because of the advent of the pandemic to be able to palliate them and thus guarantee the continuation of a good quality of care.

Materials & Methods

This is a qualitative study based on individual interviews with semi-structured questionnaires centered on a period of two months carried out at the Andrainjato Fianarantsoa University Hospital Center in Madagascar. We included all staff from the endoscopy department to obtain diversity on gender, age and profession. Those who did not answer the call for investigation were excluded. The staff interviewed was free to provide personal information or not. A qualitative design was developed for our study. The sampling is non-probabilistic with convenience samples. The sample size is 15 people.

The staff was interviewed by a communication manager within the hospital during a face-to-face interview after obtaining written agreement from the participants. The interview explored open questions: reactions to the onset of the disease, the main preoccupations, adaptation to different protective measures, opinion regarding the new work protocol, changes perceived by each person since resuming work activities, opinions on the use of individual protective equipment, feelings on the first day of work and after several months of work, and possible problems with sleep, current life satisfaction, addiction, and alimentation. The native language of the surveyed personnel was used for the questionnaires and transcribed into English.

Results

Fifteen staff took part in the individual interviews, including two doctors, one intern, six nurses, four laundry staff, one stretcher bearer and one waste disposal manager. The sample consisted of five men and ten women. The average age was 34 years (25 years to 48 years).

The attitude of staff to the disease

The first reactions: Eleven of the staff interviewed spoke of fear when the disease was first announced in their country. Their fear was mostly of exposure from their work, but also included the fear of dying, and the fear from seeing the death toll in other countries. I was afraid of the disease but also of my profession which is very high-risk.

I was so scared and thought about not working anymore because my child is still too young.

Other staff was mostly worried about what might happen.

We had to prepare, we are more exposed during endoscopy, and we had to think carefully, resume activities or not.

Some were angry.

I was furious with those who spread the disease.

The preoccupations: The main concerns were mainly centered on the fear of transmitting the disease to relatives, children or parents.

I am worried that I would catch the disease and die. Also, my children are still young if they ever get sick.

I am worried that my family could catch the disease.

I am especially afraid for my parents who are elderly.

Some were more concerned about the harmful consequences of the disease, such as death, quarantine, severe form.

I am afraid of the severe form.

I am afraid of dying.

Others are just afraid of catching the disease.

I am afraid of the contamination.

I am afraid of patients who have not been tested.

Endoscopic work

The changes felt by everyone: Since the resumption of endoscopic activities, the organization of the hospital underwent a number of changes. These changes were felt by everyone, whether in their tasks or in relation to the completion of the exam. Personal Protective Equipment (PPE) was emphasized. But due to shortage of equipment, the cost of examinations increased in order to ensure the continual supply of equipment. Those who felt changes in their tasks said:

The organization of the hospital itself has changed.

My work has increased as well as the working hours.

Others said changes in exams.

There is currently a strengthening of individual protection, such that the time taken to take charge of patients has increased.

The cost of the exam has increased, the masks are expensive.

The number of patients decreased during the sessions.

The number of patients has decreased. Patients have to wait for the test results after all tests have been completed. For the ligation of esophageal varices, we are forced to transfer the patients to another hospital for post-procedure monitoring.

Opinion on the new working protocol: The staff's opinions on the new working protocol fell into two main camps. One camp of people adheres to the new working protocol. These personnel find comfort in the use of protective equipment and are happy to be able to continue working in spite of everything.

The new organization is very useful because we can protect

ourselves and not spread the disease.

The new protocol is essential to protect ourselves and our colleagues.

Among those who complained about this new protocol were those who perceived an increase in their workload and those who are not comfortable with the return to work.

It increases my work.

Is the return to service activities good for me? No, because endoscopy exposes a lot to the disease. I am sad for the patients.

Opinion on the use of PPE: In our study, we found a group that uses PPE during their working hours and a group that does not. For those who use PPE, they note that they are embarrassed while carrying out their work. The mask and face shield make their task difficult and are a source of fatigue.

The mask makes you sick, it squeezes your face, and the visor blurs your vision.

I am embarrassed by the gown; it is difficult to do laundry with gloves on.

It is difficult with the FFP2 mask; it causes a lot more fatigue at the end of the sessions.

Meanwhile, those who did not receive PPE demand it.

If there is PPE, give me one.

For me it is just a gown, my work clothes and a cloth mask.

Mental health

Feelings on the first day and after several months of work: On the first day of work, the feelings were mostly fear, stress about what is going to happen, worries about protective equipment. But it was observed that as the work progressed, the fears and concerns dissipated.

I used to be scared but now I am not scared with protection anymore.

On the first day, I was concerned, will the equipment be sufficient? But with work, I have found that you can live well with it.

I was a little stressed before because we were going to experience something new. I was a little doubtful in case the protections were not yet operational. But we are calmer now, the doubt is dispelled. Despite everything, we were able to find people who were delighted to work in endoscopy.

I was happy to be able to continue endoscopy for my training.

And for one person, the fear had persisted despite returning from work.

I am always scared to go out, if I could change my job I would.

Satisfaction with current life: We asked everyone's satisfaction

with their current life, with their work. Again, there were two main groups. The first group of people was happy with their lives, with being able to continue working and with being well protected with the new hospital arrangements.

I am satisfied because we are protected.

Yes I am satisfied because the work continues.

In the second group, there were more people who would like to return to life before the disease. Some who do not have PPE call for more protection, and others argue that consideration of medical personnel is not enough.

I want to return to life the way it was before.

I should have full PPE.

Medical workers are trying so hard with this disease but not getting enough recognition.

Sleep assessment: There are those who have trouble sleeping for several reasons. Sometimes the reason does not depend on the onset of the disease, sometimes it is because of fatigue or because of fearful thoughts.

I have headaches, maybe from the mask.

I can not sleep because of my thoughts.

I think too much about the number of cases, my work has increased I am too tired and cannot sleep.

I have a baby.

For those who do not have a sleep problem, they stated that they were mentally prepared.

I have already prepared myself mentally.

I am used to dealing with emergency and critical situations.

Addiction assessment: We evaluated the consumption of each one, be it alcohol, tobacco or other substances such as coffee. There were people whose use has increased since the outbreak was declared. For others who did not have any addictions, they stated that they had started drinking alcohol.

Because of my headaches, I drink coffee every day now.

I drink some beer now to help me deal with fatigue.

I drink a little wine.

There was contrarily some staff who had reduced their alcohol consumption because of their fear of the disease.

I spaced out my consumption for fear of the COVID.

Weight and diet: Most staff increased the amount of food they ate or changed their diet. Often it was justified as a way of protecting themselves from disease.

P1: I increased my diet because we need to boost immunity.

P7: I eat a lot because of fear and stress, but I try to eat balanced.

P15: I cut down on my alcohol intake so I eat a lot to compensate.

Discussion

This is the first qualitative study looking at endoscopic staff during the COVID-19 pandemic. Our sample is varied in terms of age, gender and occupation. Our results may not be representative of all endoscopic personnel in Madagascar, but some problems in the literature can be found.

Attitude towards illness

The reactions: We observed in our study that the reactions of staff to the disease were mainly fear, worry, and sometimes anger.

P7: I was so scared and thought about not working anymore because my child is still too small.

P1: I was sad; I was worried about the Malagasy people.

P4: I was furious with those who spread the disease.

This was consistent with a study in Singapore where 76% of the population included in their study said they were afraid of getting sick from Severe Acute Respiratory Syndrome (SARS). Despite this, 69.5% had accepted the risk of contracting the disease in their work and doctors accepted this risk more than other health workers [7]. In our study, the doctors were more worried about the protections and the impacts on the population rather than possibility of contracting the disease.

Worries: A group of personnel was especially concerned about their families, their children.

P9: I am worried that I would catch the disease and die. Also, my children are still small if they ever get sick.

P3: I am especially afraid for my parents who are elderly.

Another group said they were more afraid of contracting the disease, as well as the negative health consequences.

P1: I am afraid of the severe form.

P12: I am afraid of dying.

In the literature, the concerns of health workers are centered on the viral infection itself, the fear of contamination of relatives with damaging consequences for health [4]. It was also consistent with a Malaysian study which claimed that family and social life have an impact on mental health: 82% of the population included in the study was concerned about inadvertently spreading the disease to their family, friends, and colleagues [7].

Endoscopic work

The new working protocol: Hospital flow was reorganized in order to allow for the safe return of endoscopic activities.

P14: I was posted in the department with the new organization.

P2: The number of patients has decreased. Patients have to

wait for the test results after all tests have been completed. For the ligation of esophageal varices, we are forced to transfer the patients to another hospital for post-procedure monitoring.

Everyone has felt the impact on their profession. An increase in the workload was noted.

P13: My work has increased as well as the working hours.

Organizational changes have been made during this pandemic in many different health settings. A study done in China during this COVID-19 crisis outlines how staff were working in a whole new context. Caregivers are often overwhelmed and exhausted by the workload and protective equipment [6]. In a study carried out in Singapore in 2005 on the impact of SARS on healthcare workers, it was found that 56% of the staff included in the survey reported an increase in stress at work while 53% suffered increased workload. All non-physician staff were likely to report an increased workload [7]. In our study, the increased workload was felt among laundry workers due to new washable protective equipment. These changes greatly influence the mental health of staff [8].

Personal protection equipment:

P4: PPE is indispensable.

Although PPE is perceived as an essential tool during the fight against COVID-19, we have been able to identify certain complaints about them: another source of fatigue and discomfort in carrying out tasks.

P13: I am embarrassed with the gown it is difficult do laundry with gloves on.

P2: It is difficult with the FFP2 mask it causes a lot more fatigue at the end of the sessions.

P3: The mask is suffocating the vision is disturbed with the mist on the visor.

The adverse effects of PPE have been previously noted in the literature. According to a Portuguese study, PPE caused headaches, heatstroke and even syncope or allergies. The mask and visor reduced the visual field the gloves reduced the sensitivity of the fingers and the overcoat hindered movement [9].

On the other hand, the use of such PPE has been confirmed as a factor reducing work stress in a study on mental health during COVID-19 [10]. This explained in our study who desired to have PPE.

P7: If there is PPE, give me one.

Mental health

Opinion on the return of activity:

P5: I used to be scared but now I am not scared anymore with protection.

P2: I was a little stressed before because we were going to experience something new. I was a little doubtful in case the

protections were not yet operational. But we are calmer now, the doubt is dispelled.

In our study participants, fear of COVID gradually dissipated with time. Similarly, according to the literature, social support, logistical help from the institution decrease the levels of stress, anxiety and depression among caregivers. The reorganization of teams with a coherent supervision and the assurance of PPE promote resilience [4]. A Chinese study had also found that regular exercise was a protective factor against anxiety symptoms (OR 0.71; $p = 0.001$) [11].

Despite this, for one person, the fear persisted despite everything.

P7: I am always scared to go out, if I could change my job I would. The same Chinese study found that risk factors for stress during this pandemic were female gender, a history of chronic diseases or mental disorders, a feeling of exposure to a greater risk contamination and the feeling of isolation from family. Conversely, use of protective measures was a protective factor [11]. Nurses were most vulnerable with determined anxiety focused on infection with an increased risk of psychiatric morbidity according to a French study [4]. In our study, a nurse who was not using PPE and has recently had a child announced:

P7: Is the return to service good for me? No, because endoscopy exposes to the disease a lot. I am sad for the patients.

Her level of stress could be explained by the fact that she had a number of risk factors: female, nurse, increased perception of risk, concern family.

Addiction:

P8: Because of my headaches, I drink coffee every day now.

P13: I drink some beer now to help me deal with fatigue.

P15: I spaced out my consumption for fear of the COVID.

In our study, we found changes in the consumption of alcohol or coffee among staff after the pandemic. In an American study, alcohol consumption and the risk of addiction increased for those working on the front line. There was postulated to be a relationship between alcohol and post-traumatic stress levels, and the amount of post traumatic stress was related to the degree of exposure to SARS [12]. This was found in our study, although one person with high alcohol consumption decreased his consumption since the start of the pandemic.

Assessment of depression:

The symptoms of depression are insomnia, anxiety, and states of stress [4]. In our study, three nurses and two laundry staff reported sleep problems, and six personnels including five women and one man expressed their current life dissatisfaction during the interview.

P10: I can not sleep because of my thoughts.

P13: I think too much about the number of cases, my work has

increased, I am too tired and cannot sleep.

P7: I want to come back to my old life I want the disease to stop.

These problems mainly affected the women in our study. In a study on the mental health of health workers carried out in China in January 2020, nurses, women and frontline workers were found to have more severe levels of symptoms of psychological impairment. Depression is more serious among nurses, with 7.1% of nurses versus 4.9% of doctors experiencing depression, and among females, with 5.8% of women versus 3.4% of men experiencing depression, according to a Chinese study on factors associated with mental health in health workers exposed to COVID-19 [13].

Conclusion

The COVID-19 pandemic is remarkable for its novelty, speed of transmission, and elevated mortality, all of which contribute to increased psychological impacts on health professionals. Those on the front line are exposed to the risk of contamination, physical exhaustion as well as a shortage of materials similarly to what we found in our study. We observed that the use of Personal Protective Equipment (PPE) may have reduced stress among personnel. The data from this study suggest that it would be useful to screen for possible psychological disorders in staff with standardized questionnaires during, immediately after, and longer after pandemic. Furthermore, it would be important to adjust working hours in order to adjust for the detrimental physical and psychological aftermath of working during a pandemic.

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Conflict of Interest

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. Informed consent was obtained for this publication.

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