AMERICAN UNIVERSITY OF BEIRUT

EXPLORING THE ON-CALL SYSTEM AT AUBMC. FACILITATORS & BARRIERS

by
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A project
submitted in partial fulfillment of the requirements
for the degree of Master of Science in Nursing
to the Rafic Hariri School of Nursing
at the American University of Beirut

Beirut, Lebanon
January 2023

AMERICAN UNIVERSITY OF BEIRUT

FACTORS AFFECTING NURSES RETENTION IN A LEBANESE MEDICAL CENTER

by

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Date of project presentation: January 18, 2023

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ACKNOWLEDGEMENTS

I would like to thank Dr. Myrna Doumit and Dr. Lina Younan, my first and second reader, for their guidance, efforts and for their enormous support throughout this period.

Special thanks to Dr. Samar Noureddine and all the members of the Hariri School of Nursing for their valuable inputs and suggestions throughout this project.

I would also like to thank the Nursing administration at AUBMC, Mr. Hisham Bawadi, Mr. Ali Tfeily and of course my Nurse manager Mrs. Nadine Ghobreel for their contribution to this project.

Last but not least, I would like to thank my Husband, and my family members for their continuous support and encouragement.

I also express my deepest thankfulness to the nurses that participated in this project for their precious time during the focus groups. Their input was of great importance for the project findings.

ABSTRACT
OF THE PROJECT OF

Hajar Oussama Amad for Master of Science in Nursing
Major: Nursing Administration and Management

Title: Exploring The On-Call System at AUBMC. Facilitators & Barriers.

Background: An on-call scheduling system is used to ensure that the appropriate employees are available whenever needed. The aim is to create 24-hour staffing coverage in various hospital departments. When in need, RNs must be ready, 24/7, at any time.

Purpose: To explore how nurses working at AUBMC are living under the current On-call system, their experience, and preferences.

Methodology: This project followed the qualitative descriptive design. Sixteen nurses working at AUBMC shared their experience under the current on-call system in three focus groups discussions. Focus groups were held between October 2022 and November 2022, during working hours at AUBMC. Data analysis was done through a qualitative descriptive method following Braun and Clarke's thematic analysis methodology.

Results: Four themes emerged from the data. 1- Threat to Homeostasis (Internal and External); 2-The need to be fairly reimbursed; 3-A solution and a problem; 4-The shy dream.

Conclusion: This project revealed a negative impact for using the on-call system as a long term solution for nurses' shortage and staffing. Several recommendations were proposed according to the RNs requests and dreams such as standardization, a clear policy, remuneration in terms of fresh dollars and so on.

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CHAPTER I

INTRODUCTION

An on-call scheduling system is used to ensure that the appropriate employee is always accessible, day or night, to respond rapidly to any incident, event, or outages. Engineers, customer service, information technology, electricians, and plumbers are the main ones associated with such a schedule. On-call scheduling programs are used in many sectors, but they play a crucial role in healthcare services. In order to provide a high-quality patient care, the on-call scheduling primary function is to create 24-hour nurse' staffing coverage in vital hospital areas in case of any emergency. It is important that the right RN is immediately available when the need arises.

We explored the literature to identify the background of this system and its main components. We aimed to explore its origins and defining attributes. The literature did not state an explicit definition of the system, but rather we found descriptions of its general use as a scheduling system. Demirbilek et al. (2019) described the O n-call system as a "rational process distributing hours across employees to match organizational staffing needs with the goal to minimize travel times, balance workloads of nurses, and maximize acceptance of patient". In a study done by Pahlevanzadeh et al. (2021), the on-call system was found to be a scheduling system meant to call nurses to duty beyond their assigned work schedules, making it an intentionally unpredictable system. Scheduling nurses was deemed a challenging task due to conflicting goals such as nurse satisfaction, an evenly divided workforce and reduced overall costs (Pahlevanzadeh et al. ,2021).

While searching in the literature for a clear definition of the on-call system, there wasn't an explicit definition but rather we found two descriptions of how the system can be used.

A. Implementation of the On-call System at AUBMC

We aimed to understand the integration of the on-call system in the scheduling of the nursing taskforce within the scope of AUBMC, the institution in which this project is applied. The purpose was to explore how this project aligns with the mission of the institution and when it was first used as a scheduling system, and how it was implemented across different units. AUBMC's mission and vision state the importance of delivering quality and transformative health care services. To further understand if the on-call system is supporting that vision, an interview was conducted with the ex-nursing director Mrs. Gladys Moro and the current nursing Supervisor Mrs. Rawia Abdo. This interview shed light on the role and history of the on-call system at the institution.

Both Mrs. Moro and Mrs. Abdo stated that the system has been in place at AUBMC in the early 90's, after the Lebanese war. It was first used primarily in the operating room (OR), recovery unit and kidney dialysis. It was also used in critical care unit (CCU); registered nurses (RN) were kept on-call in case of any sudden ST Elevation Myocardial Infarction (STEMI) cases. In terms of compensation, kidney dialysis and CCU on-call RNs were paid when assigned as on-call, regardless of whether they actually received and responded to the call. When on-call for duty, their time at work was considered overtime and they received payment accordingly. In

addition, kidney dialysis, OR and recovery on-call RNs were provided with transportation to and from their homes when called to work.

Crisis stabilizing unit (CSU) always had an on-call team of RNs on board for the weekend in case of any emergency. Furthermore, given that the aforementioned departments are specialized entities, this is still in effect (G. Moro, personal communication Jan 30, 2023; R. Abdo, personal communication, December 18, 2022).

B. Impact of National Crisis on AUBMC Staffing needs

The American University of Beirut-medical center was considered one of the best nursing staffed medical centers in the country. Before October 2019, most units had sufficient staff and had fixed nurse-to-patient ratio. In case of emergencies, shift coordinators would call nurses to duty and nurses would be paid for those hours, and given time-off at a later stage. However, under the current circumstances and with the financial and social crisis, AUBMC had to adjust to the situation. The administration started to apply the on-call system on all nursing units, seeking staff coverage in times of shortage, under-staffing, and burn-out.

AUBMC follows the American Nursing Association standards for staffing. It has 12-hours shifts and 8-hours shifts. Modular RN is used as a nursing care model. And a couple of units such as the Neonatal and Pediatric intensive care units, follow the primary nursing care model.

As a solution for the staffing shortage, AUBMC decided to use the on-call system to cover unpredictable RNs' absences (sick leave, death leave etc.), chaotic shifts and high nurse-to-patient ratio. This approach in nursing staffing led to frustration

and dissatisfaction amongst RNs, which is the focal point of interest to explore this topic in this project.

What triggered my interest is that I am a nurse as well, currently working on a unit affected by the implementation of the on-call system. Moreover, while talking to my colleagues, I noticed that nurses were not fully satisfied with this process. This sparked my curiosity to investigate the reasons behind this, and explore methods of improving it for both me and my colleagues.

I'm also pursuing this project since it is aligned with my Nursing Administration and Management track. In addition, this project is designed to support and to be part of the continuous improvement plan in the hospital that seeks nurses' opinions regarding processes and ways to improve them.

C. Project Aim

The aim of the project is to explore the opinion of AUBMC nurses working on nursing units about their experience under the current on-call system.

CHAPTER II

LITERATURE REVIEW

The purpose of the literature review is to dwell into the literature and see the different on-call systems. It's important to learn about their applications, implementation strategies, and the feedback received on them, in order to learn from them and compare them to our own results.

While reviewing the literature, we tried to search for an ideal on-call system, one that encompasses all the concerns, covers the different types of systems, and contains various usages and applications. This was not found explicitly in the literature. Even there was scarcity in the literature regarding the use of the on-call system in health care settings, and we had to dig deeper into the topic of "Nurses scheduling & staffing" in general. This is in order to have a clearer view on the effect of staffing on the RNs' performance, their personal lives, and even on patients' outcomes.

A. The purpose of using the On-call system

Abdelkareem et al. (2021) conducted a systematic review on the challenges of nurses' scheduling and proposed systems in healthcare scheduling, between the years of 1995 and 2016, across various healthcare institutions. In this study, the on-call scheduling system was defined as being essentially designed to (a) to fulfill nurses' quota requirements for each unit, (b) manage workload assigned to each nurse, (c) meet skill requirements of units, (d) reduce breakdown between two shifts, (e) maximize number of consecutive days at work and (f) manage ergonomic rules related to days off. The on-call scheduling system aims to address these constraints by decreasing manual scheduling,

increase demand coverage, maximizing nurse preference and promoting a culture of equity among nurses (Abdalkareem et al, 2021).

B. The impact of Nurses' Scheduling and Staffing

Hust and Grossman (2022) reported, based on a qualitative study done in New York on medical imaging and interventional radiology RNs, that nurses who were on call expressed feeling anxious and uncertain in their roles. The nurses mentioned than in addition to existing stressors, they were also unable to enjoy time off-duty. RNs were worried about probable cases, possible traffic jams, parking availability, or whether the RN's family will be able to manage at home without them.

The results of the study concluded that being on call might make impact on RNs' sleeping patterns due to the heightened feelings of stress over hypothetical work scenarios and the possibility of missing phone calls. Over time, the on-call system was also found to create inability to cope with minor everyday irritations for some RNs. These factors overall were found to be damaging to RNs' work-life balance, perceptions of workload and satisfaction within their role (Hust & Grossman, 2022).

Another study conducted in the operating room unit of a hospital in Thailand offered a goal programming method for nurse scheduling that takes into consideration staff personal preferences (Pavinee et al. 2019). In this qualitative study, the authors reported in their study that many hospital nurses were subject to understaffing, high workload, and inflexible work schedules. This was found to have a negative impact on patients' safety and the quality of healthcare operations, which also results in less patient-nurse engagement (Pavinee et al, 2019).

Moreover, according to a cross sectional research done by Rizany et al. (2019) in Indonesia, on 102 nurses in an army hospital, discussing the impact of nurse scheduling management on nurses' job satisfaction, a positive correlation was found between the implementation of nurse scheduling management and nurse satisfaction. Furthermore, the study showed that a proper scheduling process was correlated with an increase in nurses' satisfaction and the nurse scheduling process allowed nurses to have a balance in their professional and personal lives. The researchers concluded that the organizing and controlling aspects of nurse scheduling were the dominant factors affecting nurse job satisfaction. According to an observational study done by Lasater et al. (2021) in Philadelphia USA, on patient outcomes and cost savings associated with hospital safe nurse staffing legislation, results indicated that 60% of the hospital's costs were associated with staffing costs especially nursing staffing. This is due to the fact that the average nurse-to-patient ratio is one nurse to 6.3 patients. Thus, as per the latter observational study, the on call system and staffing approaches are used as a scientific management tools to reduce staffing levels without compromising the quality of services.

C. Artificial Intelligence and Scheduling

In a study done in hospitals in China by Leung et al. (2022), artificial intelligence (AI) was used to develop a nurse roster scheduling system. This economic, efficient and user-friendly solution has been developed using end user operational research tools. The study showed that using AI-supported technology such as an open-source platform was successful in scheduling application. Moreover, provided with the proper training in this AI system, hospital information personnel can implement this system across the wards,

and update it regularly with the latest policies and changes in nursing manpower (Leung et al, 2022).

D. Effect on nurses and patients

Molina et al. (2018) conducted a meta-analysis study of Spanish hospitals; the results indicated that medical area nurses are mostly affected by low levels of personal accomplishment, followed by high levels of emotional exhaustion and increased depersonalization.

Furthermore, an observational study done by Kikuchi and Ishii (2016) in Japan on 614 nurses, showed that when RNs are scheduled to be on-call, 81.3% of the nurses reported mental hardship and 69.4% felt physical burden. Moreover, findings of a systematic review done by Chemali et al. (2019) on the impact of a complex working environment within Middle Easter hospitals indicated that the highest degrees of burnout among healthcare professionals were reported by nurses who are working under chaotic work schedule, understaffing, stress and exposure to violence and conflict.

A descriptive phenomenological study conducted by Ansah et al. (2021) in Ghana explored the risk factors for nurses' burnout. Burned-out nurses were found to be female gender and youth. In addition, a lack of resources and help to handle workload are risk factors for nurses' burnout. The study also assessed nursing managers and nurses' experience using an unorganized and unpredictable scheduling process across multiple hospitals in Ghana. RNs felt undercompensated and underappreciated working under a system not supported by scientific rationales (Ansah et al, 2021).

In a systematic review conducted by Driscoll et al. (2018), the effect of nurse-to-patient ratios on nurse-sensitive patient outcomes in acute specialist units, in different European countries was explored. Results revealed a link between better patient outcomes and nurse staffing levels. Reduced mortality, medication errors, ulcers, usage of restraints, infections, and pneumonia were linked to higher staffing levels. Furthermore, nurses expressed their frustration of staffing shortage on the unit, and the study showed the serious impact of inadequate staffing on patients' safety and outcomes, quality of care delivered and nurses' satisfaction and burnout (Driscoll et al, 2018).

In another observational study done by Bridges et al. (2019), in the United Kingdom, 270 patients' "care encounters" were under observation, negative ratings were given to 10 % of the observed encounters. And as the number of patients per registered nurse grew, the likelihood of a negative interaction also climbed noticeably. The study also showed that an increase in assistant staff numbers do not result in better staff-patient interactions when RN staffing is minimal. An observational study from Finland by Lisbeth et al. (2018) on nursing workload, patient safety incidents and mortality, found that when the daily workload per nurse was high, patient death risks were around 40% higher, while patient safety event probabilities increased with a range of 10 to 30% higher. However, there was a 25% reduction in the likelihood of a patient safety event and fatality if the daily workload per nurse was lower than the level evaluated (Lisbeth et al. 2018).

E. Coping strategies for the RN when being On-call

The Study by Timothy and Valerie (2022) on radiology nurses that has been mentioned previously, also suggested that when handling the obligation of being on

call, it is imperative to cultivate and preserve a positive mindset. Authors suggested that for the nurses on-call to practice safely, they must be professionally, intellectually, and physically prepared for every call situation. They will be more effective in their position and experience greater job satisfaction if they can learn to handle this significant responsibility with a good attitude. Keeping a positive outlook and having arrangements for the call day might make the difference between an anxious and miserable shift and one that is successful at home and at the bedside (Hust & Grossman, 2022).

Since October 2019, Lebanon has gone through political and economic turmoil, with the crisis impacting the functioning of many industries and institutions in the country, including AUMBMC and its staff. The crisis led to inflation and severe devaluation of local currency, affecting salaries and instigating administrative strategies to reduce financial burden. Many hospitals had to downsize their workforce, and rethink how they allocated their human resources. This caused a shift in staffing and scheduling and was one of the contributing factors to the nursing exodus that occurred since the beginning of the crisis (Jabbour et al. 2020).

CHAPTER III

METHODOLOGY

A. Method

Design

The design of the project is qualitative descriptive. We followed this approach since the aims of our project are to explore the facilitators and barriers to understand how, when and where the on-call system is being applied. The qualitative design will provide us with a deeper understanding of the RNs' experience and allows us to ask questions and get answers that could not be easily inverted into numbers.

B. Recruitment and Sampling

An approval from AUBMC Chief Nursing Officer was obtained to proceed with the project. A facilitator from the hospital was assigned to facilitate the recruitment process. Mr. Ali Tfeily helped in identifying the participants by sending an invitation e-mail to the unit asking the nurses if they are willing to participate in the project. Inclusion criteria was discussed with him and accordingly he identified and organized the focus groups.

Once Mr. Tfeily received the preliminary approval of the nurses, he informed the PI of the project and an invitation e-mail from the PI was sent to potential participants explaining the purpose of the project. A purposeful sampling and maximum variation sampling technique were followed.

The participants were divided into three focus groups. All of the three focus groups were held at AUBMC, 6th floor, during working hours where the participating RNs were on duty, no one had to come from home. The focus groups were held in October and November 2022.

B.1. Participants (table 1)

We recruited female and male nurses, whose ages ranged from21 to 50 years old. We had RNs who were married, with and without children, alongside engaged and single RNs. Some of the RNs were living 5 to 20 minutes away from the hospital and some lived 1 hour away from the hospital. All of the RNs had a minimum experience of 6 months at the hospital and in the same unit, currently practicing and working under the on-call system. All of the RNs of course had a BSN degree, some had another degree in parallel and some had a masters' degree. Participants were from different working units, including both adult and pediatric units, in addition to specialized units, all stated in the below table.

Participant's recruitment followed the maximum variation sampling technique in terms of the inclusion criteria.

Table 1: Participants characteristics

Demographics Characteristics	N=16	Demographics Characteristics	N=16
Gender		**Experience**	
Female	9	1-6 months	-
Male	7	6-12 months	1
Age Group		1-5 years	2
20y-30y	7	More than 5 years	13
30y-40y	8	**Education**	
40y-50y	1	BSN	13
Marital Status		MSN	3
Married	8	PHD	-
Single	7	**Current Working Unit**	
Engaged	1	Kidney Dialysis	-
Divorced	-	PACU	-
Widowed	-	Medical-Surgical Pediatrics	1
Children		Medical-Surgical Adult	5
Have children	8	PICU	2
Do not have children	8	NICU	1
Area of living		Psychiatry	-
Next to the workplace (5 mins away)	1	Pediatric Oncology	3
15-20 mins away from workplace	7	Adult Oncology	1
1 hour away from workplace	8	Operating Room	-
		ICU	3
		CCU	-

C. Data collection (N=16)

C.1. Recording

Three focus groups took place with an interval of ten days in between. The following questions were posed:

1. What do you know about the on-call system?
2. How are you currently living under the on-call system applied on your unit?
3. If you are dreaming. What would be your preferences and how would you change this on-call system?

Probing was conducted for each question. In order for the participants to fully comprehend what we are asking for. Each question was repeated several times in various ways. At the beginning of each focus groups, participants filled a demographic form that includes all our requirement criteria, and the pseudo names were chosen by the participants. The three of the focus groups were directed by the first reader Dr. Myrna Doumit and myself as an observer, and the main speakers were the participating RNs. Each group included RNs from different units, age, gender, years of experience, living distance and marital status. Each focus group was recorded, and interviews lasted between 50 and 60 minutes. We sought saturation within the focus group and between the focus groups (enough data has been collected, no additional information were found).

Participants spoke 2 languages, Arabic and English, so each interview was recorded and transcribed, transcription was checked verbatim, then translated and back translated. And the back translation was checked again by the first reader and myself. The first reader and observer reviewed the transcripts for accuracy. In order to prevent socially pleasing answers, we were clear that there is no right or wrong answer, and participants were informed about the importance of their opinion, their own ideas and experiences. Participants were also asked to freely speak their minds, and they were assured confidentiality of the information.

C.2. Ethical consideration

Focus groups were digitally recorded. Participants approved of being recorded and data was kept in a secure locked place.

Although we did not get an IRB approval because the project was part of a process improvement plan at the hospital, we kept the identity of participants confidential. An oral approval was taken from each participant, we used pseudonyms that they had chosen; real names had not been used. Participants were given the reassurance that they may choose not to participate in the focus group discussion at any moment and for any reason, or to leave before it is over. Moreover, softcopies of data were kept in secured files in the computer and disclosed to the authorized people.

D. Data analysis

Following Braun and Clarke's thematic analysis methodology, data analysis was carried out in stages:

1. Familiarizing oneself with the data
2. Generating codes
3. Constructing themes
4. Reviewing potential themes
5. Defining and naming themes
6. Producing the report.

Adapted from Braun & Clarke (2006).

Focus group data were analyzed using a qualitative content analysis approach. The qualitative descriptive method was used to code and review the phrases from the informants' points of view numerous times. We were two, Dr. Doumit and myself, each one of us read the interviews solely several times. Words, phrases, and paragraphs holding important ideas or concepts were given codes. To support an inductive approach, data

were analyzed and coded without using predetermined codes or categories. The language participants used to explain their experience with the on-call system and their preferences was given particular consideration. We compared our notes, and the codes were subsequently examined to identify similarities and differences between the three focus groups and create themes that reflected the text's evident substance.

We almost had an agreement of 98%, and when the 2% disagreement on the coding arises, we went back to the text.

Themes emerged from data by grouping codes with related or similar meanings.

CHAPTER IV

RESULTS

Four themes emerged from the data:

1. Threat to homeostasis
2. The need to be fairly reimbursed
3. A solution and a problem
4. The shy dream

1. Threat to homeostasis

Participants described the current on-call system as affecting personal life, not knowing if they were going to duty or not, waiting stressfully and feeling like time is wasted. The RNs mentioned that extra duties are affecting their productivity at work and disturbing their social and personal lives.

RNs showed dissatisfaction with the system's application, they mentioned being anxious most of the times, unable to have other commitments when being on-call and frustrated from being always on stand-by, which falls under the title of "Internal Homeostasis".

Moreover, RNs explained how their family relationship are being disturbed even on off days, and this goes under the "External Homeostasis".

Internal:

- **Lea 2**, a 24-year-old female medical surgical RN working for 6 months now, single and living 10 minutes away from the hospital said the following:

"There is no time-limit, they might call you 1-2 hours before. You need to wait all day…When we started the on-call system, it was a mess... There is no rule."

- **Ahmad 1**(male, 40 years old, married with children, 14 years' experience, medical surgical RN & living 1 hour away from the hospital) also added that:

"The day was wasted already, even for the RNs living around the work place, they won't be able to do much."

- **Ahmad 2** said:

"Frustrating. No break. We will be working very fast since you already have more patient than what we should have. So yea it is very frustrating... No break, patients' safety is affected. There's an issue."

- **Ahmad 1** also added:

"In the end patients' safety will be affected. If anything went wrong who's going to protect us? The problem is when it affects patients' safety."

- However, **Lea 2** also mentioned that:

"Psychologically the quality of care decreases, to the patient, other than that our responses to the patients, first day we are smiling and taking care of him/her, and we help him, the third day we are not going to be like that, or the 4th day, okay I will come, okay I will get it to you, ma'am, I can't help you. Social things, we are not focusing on medications, no calculation of medications, no proper checking on IV, all of these are

short cuts short cute because physically we are not capable anymore, but we have to come because we are on call."

- **Lea1** (female, 35 years old, married with children, more than 5 years' experience, PICU RN and living 1 hour away from the hospital) mentioned the below:

"We can't make a decision till the end of the on-call period. Even if we didn't come, but we are committed to this, we can't do anything."

External:

- **Sara 3**, a 35-year-old female RN in the PICU, single with a 10 years' experience, living 15 mins away from workplace added:

"Yes I am stressed, they might call me in any second…I'm on call tomorrow, I can't stay up late, I can't see my friends."

- Mehio also added that:

"…But the problem when I am 3 off, I work 4 days, and I come on call, I feel so tired… But the problem when I am 3 days off, I work 4 days, and I come on call the fifth day, I feel so tired. Imagine I take 3 off days just to sleep, I sleep a lot."

- **Toula** (female, 40 years old, married with children, more than 5 years' experience, NICU RN living 20 minutes away from workplace:

"Regarding if I came one or 2 days per month for on-call, I feel tired all the time. I don't feel myself organized, I can't continue, even at home."

- **Rita** mentioned:

"… There's no rule or standardization on the hospital. There's no rule, if we have crisis or sick patient or sick leave, what is the rule to call the on call? Every week we have a special case, and they discuss it based on the decision of the manager if someone from other unit came to cover or not."

- **Salam** (female, 28 years old, engaged, 7 years' experience, pediatric oncology RN and living 20 minutes away from the hospital) said that:

"…And it feels like part of my life is being canceled."

2. The need to be fairly reimbursed

Participants clearly expressed that this on-call system does not remunerate them fairly and it is leading to burnout. When they come to work, they are not reimbursed for transportation, they are not paid and they are not even given vacation or off days instead. And all these things are leading to burnout.

- **Sara 1** (female, 25 years old, 3.8 years' experience, pediatric oncology RN and living 20 minutes away from workplace) said:

"There's also a major issue for people living 1 hour far from work, which is the transportation, because sometimes the on call transportation are not considered however this person came to duty and worked for hours"

Mehio and **Lea 1** also mentioned the same thing regarding transportation:

- **Mehio** (male, 37 years old, married with children, more than 5 years' experience, BSN and MBA, medical surgical adult RN living 1 hour away from the hospital):

"*There is no transportation…We need to have appreciation, in our situation, at least the on-call day to be payable."*

- **Lea 1**:

"No transportation!"

- **Fredi** (male, 34 years old, married, more than 5 years' experience, adult oncology RN and living 1 hour away from the workplace) added that:

"The day I came for on call, I didn't take it back, and the transportation was not paid…This on call day if I come, how can I take it in return? Or as what?"

- A clear frustration was present on not taking anything in return, this is where **Issa** (male, 30 years old, single, 7 years' experience, ICU RN and living 20 minutes away from workplace) said:

"We are not taking anything in return!"

- And **Rita** (female, 10 years old, single, MSN, 17.5 years' experience, medical surgical adult RN and living 1 hour away from the hospital) added that:

"…And we cannot depend on taking back these hours, it is like we are working for free"

- **Issa** mentioned:

"It is frustrating reporting to duty and you do not know if you are going to get it or not. Previously, when there was a shortage, all the time odds that we had were removed. It is frustrating… Everyday someone wants to leave."

- **Ahmad 1** said:

"All the floors have shortage, and they are not taking anything in return."

- **Lea 2** also said the following:

"I feel like confused, nothing is clear, what time maximum they might call?

What will you get in return?"

3. A solution and a problem

For the current situation, participants agreed that the on-call system is a solution, but it should not be long-term solution, since it is creating additional problems. It might look contradictory but RNs felt supportive to the administration though they still think that the way of the on-call system is used is creating more problems than solutions.

- **Sara 2**, a 28 years old female RN for 6 years now in the ICU and living 20 minutes away from the hospital mentioned that:

"When all the hospital was in shortage yes it was a solution. But now we are coming for the sick leaves."

- **Toula** added:

"I see it as help to the unit. We are helping our department."

- **Mehio** said the following:

"In the end if a staff came helped me with the on call, the duty is less overwhelming, it's a good thing."

- **Fredi** also added:

"There is no other solution. There is no solution other than the on call."

- **Salam** mentioned:

"But the good thing it is a solution for the shortage, because we have shortage and all of us are exposed to take a sick leave, it is normal we want alternative or someone who comes to cover, so yes it is a solution."

4. The shy dream

When we asked our participants to dream during the focus group, RNs were very hesitant to dream, as if their dreams were even blocked. The latter showed the level of demoralization and frustration they have reached, and it took us more than 5 minutes to convince them that they need to think out of the box and they need to dream.

When participants were asked to dream of the ideal on-call system that they would like to work under, they were very hesitant at the beginning from expressing their ideas and preferences. When they opened up and started talking, we were able to feel the frustration in their nonverbal communication such as in their voices, the way they were expressing themselves and their body motion.

- **Sara1** requested the following:

"On-call duties must be distributed like every 5 or 6 weeks you have on call for example. Because weekend work is different than the week days work, that's it."

- **Rita** suggested:

"For me ideally, the person must be asked if they want to be on call or not. Not to be obligatory, to be according to the person's preference, and ideally there should be a

pool team for on call. There should be remuneration either money or time odd to be sure present."

- **Mira** (female, 28 years old, single, 6 years' experience, medical surgical adult RN and living 20 minutes away from the hospital) also asked for:

"…And this on call should be overtime. It is worked as extra hours, if they don't want to consider it as overtime they should give it back to the RN as off-day. It should be either the first day of the off days or the last day of the off days…I want 2 RNs, one responsible for day on call and one for the night on call."

- **Lea 2** dreamt of:

"The dream that can be most motivating at this time is financial reward, overtime or fresh dollars. To be more paid for the on call. It is my off-day, my right to say no."

- **Sara2** declared that:

"The first dream is that they do not call me for on call, or else, to be as per RN request. To be on schedule once every 4 weeks, and I choose which day I want."

- **Maher** also added:

"Also, to be notified before…There should be time frame 6 hours before, preferably, and that's it…No one to be called mid the duty".

- **Fredi** also asked for:

"First of all, time limit. Second, it should be paid, overtime, because it is overtime, not straight hours, not time odd, and we have a lot of vacation days and holidays…And transportation must be included."

- **Mehio** mentioned the following:

"It should be payable. This is first thing. Second thing we should have a pool team. I might be on call and an accident happens while I'm on my way, I can't tell the patient we don't have staff, we should have a pool of nurses…And to be payable. Overtime. Some people say I don't mind to come from my off day but please we need it as overtime. And if he/she stayed at home, should be paid as straight time."

- **Mehio** also added that:

"This is not professional. If I want to dream, it should be payable by fresh dollar. Neither lollar nor LBP, there should be transportation and that's it"

- **Salam** added:

"For sure if we are going to come, we need transportation, we live far, and we have a crisis in the country…If they didn't call me they don't pay, but at least if they called me, it should be considered as over time not time odd."

- **Maher** also asked for:

"I said everyone should be on call. If we can stop it, that would be perfect, but if we can't, we need to keep it. RN should be asked who wants to take it as overtime or time odd…I prefer time odd, I prefer to have an off instead of the duty…Also to be notified before…There should be time frame, 6 hours before, preferably, and that's it…No one should be called mid the duty."

- **Sara 1** requested the following:

"Not more than 4 duties per week, to be consecutive, maybe the weekend also should not be on call, should be purely for us and that's it. And if we came, transportation to be paid".

- **Fredi** also mentioned:

"Hmmm, if we are dreaming, it should be paid as overtime. To be satisfied and comfortable. And if I didn't come, it is fine, they should be paying both ways. Why not in the end all of us we are working".

- **Mehio** added:

"But in return, we need to have appreciation, in our situation at least the on call to be payable, to take it as time odd".

- **Ahmad 2** said that:

"If it was paid, half of the problem is solved. I used to ask for extra duties before for financial reasons."

CHAPTER V

DISCUSSION

Our project highlighted the nurses' experience at AUBMC while living under the on-call system. Results revealed that the majority of the RNs are asking for modification to the system, in order to benefit from it as a short term solution, and keeping up a high quality of care to the patients while maintaining a normal social and personal life.

In the project's findings, when in charge of being "on-call", our nurses reported shift anxiety, uncertainty, stress and sleep disturbances. They have also mentioned being stressed and constantly worried about phone calls, unable to continue their daily life normally, and worrying about the traffic jam and parking lots when suddenly called for duty, which similar to the study done by Timothy et al. (2022). The studies that were found in our literature review supported some of the results obtained in our focus groups. And in alignment with the results of the project, a study done by Adelaide et al. (2021), concluded that nurses experience dissatisfaction, frustration and burnout from inadequate staffing. Molina et al. (2018) reported that nurses working in medical centers and living under an unorganized scheduling with a nursing shortage problem and heavy workload, are subject to depersonalization, low levels of personal accomplishment and high emotional and physical exhaustion (Molina et al. 2018). Moreover, a study by Kikuchi et al. (2018) reported that a high percentage of nurses' in-charge of the on-call duty expressed, mental hardship (81.3%) and physical burden (69.4%) which is in line with what we discovered in our project when evaluating the data (Kikuchi et al. 2018).

Recommendation

This project showed that employing the on-call method as a long-term staffing and shortage solution had detrimental effects. It has also demonstrated the detrimental effects of chaotic scheduling on the physical and emotional health of nurses.

Since our project's sole goal was to examine how RNs really perceive the present on-call system, it was beyond our scope to develop a better on-call system.

The following recommendations emerged from the results of the study. And based on the nurses' requests, needs and dreams, the following actions suggested standardized rules and policies for the on-call system across the hospital's units; remunerations in terms of fresh dollars and/or time off; Nurses asked for the transportation to be included if they come to duty; they have also suggested not to have the on-call as a mandatory process but let the nurses volunteer for it; time limit for calling the nurses on duty while on-call; scheduling of the on-call duties ahead of time and finally, nurses asked for the creation of a pool team for on-call.

Further projects are required to improve and ameliorate this on-call system.

CHAPTER VI

CONCLUSION

This project has shown that the on-call system and its ongoing use as a long-term staffing solution have a negative overall effect on nurses. According to the qualitative analysis of our interviews, a clear policy with standardization is one key issue to take into account when implementing the on-call system on nursing units.

Finding a different approach from the one now being used is essential given the nursing shortage Lebanon's hospitals are facing. And searching for another approach is particularly crucial since the findings suggest that long-term use of the on-call system may have more detrimental consequences on nurses' performance and happiness.

Overall, the majority of RNs are in favor of the on-call system. However, it depends on being uniform throughout all units. This would require a fair policy that is properly implemented on every unit and takes into account the effects on the performance and wellness of nurses. In the end, standardizing the system would enhance nurse-to-patient ratios and guarantee the provision of the highest caliber of care with a minimum of mistake, in line with the hospital's objective.

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