Challenges facing emergency departments in public hospitals

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Abstract: The management of hospitals are facing increasing challenges in managing the service and quality of the emergency department. This study identifies the challenges faced by healthcare professionals who work in the emergency department and identifies practical solutions to enhance the sustainable management and leadership of the emergency department. A qualitative study was conducted with health professionals who work in the emergency department in three public hospitals in Saudi Arabia, including six managers, five physicians and seven nurses. Data were collected through one-on-one interviews from purposively selected the emergency department at public hospitals in Saudi Arabia. Three themes emerged from interviews that described the challenges and experiences of health professionals: ethical dimensions, management dimensions, and health system dimensions. The results of the current study indicate that patient overcrowding, long waiting hours in emergency departments, having to make decisions concerning which patients to treat first and the quality of services, leadership and team effectiveness were major contributors to the struggles faced by health professionals inside the emergency department. This study provides the most comprehensive information available to date about the challenges faced by the emergency department managers and leadership and provides suggestions to develop short and long-term strategies to reduce overcrowding in hospitals.

Keywords: Ethical factors, Healthcare staff, Overcrowding, Teamwork, Waiting time.

1. Introduction

The emergency department is the section of a hospital where patients go when they have a serious illness or injury that requires around-the-clock specialized and intensive care. The emergency department is highly complex due to the broad range of services it delivers to sick patients who need all-day supervision by a team of healthcare professionals. The emergency department is a very busy and often noisy place and may contain healthcare workers with different backgrounds. Healthcare professionals can be defined as "all people primarily engaged in actions with the primary intent of enhancing health" [1]. In recent years, there has been a large demand placed on the emergency department, especially during the COVID-19 pandemic. This increased demand is fueled by an ageing population, the prevalence of chronic diseases, and trail population [2]. Increased numbers of patients in the emergency department can lead to unmanageable workloads, stress, shortages of healthcare professionals, and medical errors, all of which can have a serious impact on the quality of care delivered in hospitals [3, 4]. Moreover, increased demand on the emergency department can lead to the overcrowding of patients and long waiting times for a bed and treatment in the emergency department [5-7]. The management and leadership of the emergency department is therefore currently facing many challenges. To improve the quality of care and deliver a quality service that meets the requirements of intensive care, the management and leadership of intensive care units is required to adjust existing services. The management and leadership of the emergency department in this complex environment requires careful thought on how to tackle the challenges faced by healthcare professionals. The current

study aims to identify the challenges faced in the emergency department and identifies practical solutions to enhance the sustainable management and leadership of intensive care units.

Increased demand on the emergency department, especially during the COVID-19 pandemic and without the safety measures and precautions already in place in hospitals to deal with COVID-19, could negatively impact patient outcomes and safety [8]. To meet the health demands of a rapidly growing population that needs increased health services, there is an obvious need for expert management and leadership who know how to train staff to deal with events such as a pandemic, how to use new equipment and how to provide services using teamwork [9, 10]. The identification and analysis of risk factors can contribute to leaders and managers meeting this need by helping them to present risks to staff members and patients as well as provide strategies for managing the needs of special emergency department patient groups. The current study will provide the key strategies not only to improve the management and leadership of the emergency department but also to optimize it. Furthermore, the study could benefit current managers and leaders in health sector by improving their understanding of how to manage the quality of care delivered in hospitals.

2. The Present Research

Increased demand for beds in the emergency department due to an increase in the older population and an increase in the prevalence of chronic disease in Saudi Arabia has a significant impact on the Saudi Arabian healthcare system as it results in an increase in the long-term cost of healthcare and the quality of healthcare provided. Growth in the number of patients with chronic disease can increase the demand on the healthcare system and lead to shortages of healthcare providers, which can have a serious impact on the quality of care delivered in hospitals [11]. These are the main factors contributing to the increasing demand for services, which can result in a lack of services and a shortage of beds. Many public hospital patients have complained about long waiting times for appointments and spending many hours waiting in emergency rooms [12, 13]. It is difficult for healthcare professionals to deal with these cases as they are often caused by a lack of resources. The emergency department is a complex microsystem that can be a challenge to manage for any healthcare leadership, regardless of their skill and experience. Yet, little is known about the influence of that challenge on the hospitals due to the effect on the quality of healthcare provision. There have been few Saudi Arabian studies that examine the challenges faced by the emergency department, which possibly results in a limited understanding of such challenges and difficulties and makes it difficult to identify exactly which key barriers prevent great patient care and how to provide solutions to these problems. Working in health care, especially hospitals, means that the staff (nurses, physicians, and administrative personnel) will be involved in some way with any crisis that impacts either the hospital or outside the hospital, such as in the community. The management administration of hospitals are the people all staff, both administrative and clinical, will look for direction and leadership to keep facilities running as smoothly as possible. The emergency department can be thought of as "the front door" to hospitals, as many patients arrive via the emergency department. The only way management can handle the crises that happen inside and outside their hospital is to plan ahead and be prepared. In a hospital setting, especially in the emergency department, there are certain cases relating to the quality of care provided to patients or healthcare workers that require management to build processes that can stabilize the emergency department's performance in the areas of service, safety, and quality.

3. Method

3.1. Sample

A qualitative study was used in this research. Data were collected from mid-June to late August 2022 from public hospitals in the west of Saudi Arabia, which had a population of approximately 4 million in 2021 [14]. These hospitals were selected because the majority of these hospitals' admissions arrive through the emergency department [15]. The majority of interest for this research was all healthcare professionals who work in the emergency department. Interviews were conducted with

healthcare professionals who work directly within the emergency department. The interviews provided in-depth insight, specifically about the challenges and difficulties that the emergency department healthcare workers faced while doing their job. In the current study, face-to-face interviews were performed. All interviews were showed in English since staff who works in hospitals in Saudi Arabia use English as the primary language of communication. The interviews varied in period between 35 to 50 minutes. The participants met the criteria for taking part in the study, which was working at the emergency department in one of the selected hospitals. The aim of these criteria is to identify the specific challenges, opportunities, problems, and constraints within the emergency department which affect staff from their perception in order to define the barriers preventing patients' safety and provide solutions to these problems.

3.2. Measurements and Analysis

The qualitative data were collected through 18 semi-structured interviews using thematic analysis and NVivo 11. The thematic analysis was useful in analyzing the themes from the qualitative data. A few steps were used to analysis the study's data. The first was the researcher familiarizing themselves with the data. In this step, the researcher transcribed, read, and reread the participants' responses. Then, the researcher coded the research data using NVivo 11 and the data were coded for multiple sentences. In this process, the researcher identified 25 codes for health professionals. After that, the researcher searched and identified three themes for the key informant interviews. Finally, the researcher interpreted the themes and analysis then related them to the research question and literature.

4. Results

Participants were requested to offer information about their gender, age, and educational qualifications. The ages of the healthcare workers ranged from 30 to 60 years. Most participants had graduated with a bachelor's degree (80%) and had worked in the emergency department for more than seven years. Three themes emerged that described the challenges and experiences of health professionals in providing health care in the emergency department situations. These themes are summarized in Figure 1. In the first theme, health system dimensions, health professionals were asked to identify the specific challenges, opportunities, difficulties, and constraints within the emergency department which affected healthcare workers from their perspective in order to identify any barriers to ensuring patients' safety and providing high-quality health services for patients. The analysis of the interviews reported negative responses, such as overcrowding and unmanageable workloads, as reasons participants experienced difficulties in providing high-quality health services for patients. Working under pressure was emphasized by the respondents as an important factor contributing to overcrowding. Other factors such as the incomplete provision of health care due to increased workloads, time constraints, and experiencing negative impacts on personal health in hospitals were equally emphasized by participants as important factors influencing their ability to provide high-quality health services for patients. Table 1 presents selected statements from the respondents.

Table 1.
Factors and the challenges faced by healthcare professionals who work in intensive care units.

Themes	Sub-themes	Selection of response
Health system dimensions	overcrowding and long waiting times	"Everyone is abusing the ER and it is very crowded, and nurses are overloaded with a lot of multitasking"
Management dimensions	misconception of teamwork, collaboration	"Enhance hospital leadership skills to increase job setting related to healthcare professional ability"
Ethical dimensions	A shortage of staff, beds, and equipment, who gets treatment first.	"Lack of protocols concerning which patients to treat first."

In this research, patient overcrowding and long waiting times were major contributors to the struggles faced by health professionals inside the emergency department. A possible reason for these

responses could be that Saudi public hospitals provide free health care to all citizens and non-citizens and require that every patient in an emergency department be examined and stabilized. This applies to all patients, even those who do not have health insurance. Additionally, there is a shortage of health professionals to meet this high patient load. This leads to high workloads and may result in medical errors. The second theme, management dimensions, is pretended of several subthemes that link to comments regarding management and leadership, particularly concerning hospital policies and systems. The management dimensions found that affected health workers' ability to provide high-quality health services for patients included teamwork, collaborating with co-workers, leadership barriers, and communication skills.

The main management and leadership dimension that was highlighted was the misconception of teamwork, especially in collaboration. It was observed that the majority of the participants were frustrated with their hospital's strategies and leaders' instructions and stated that their co-workers did not provide support for each other without instruction from team leaders. These were the reasons supplied for why healthcare workers did not provide care that is efficient and effective. The healthcare professionals explained that their roles and responsibilities were not clearly established, which could impact upon their working conditions and their ability to provide high-quality health services for patients. Making the situation above difficult is that some Saudi hospitals tend to hire management that have medical degrees rather than managers with health management education. It is important to hire managers with a background in both health and management who can use these skills to obtain strategies to maximize the efficient and effective delivery of health services in a varied range of health systems. The ethical dimensions category identified what specific challenges and difficulties could affect health professionals' decisions to provide high-quality health services for patients within the emergency department. Most of the participants expressed their disappointment at hospitals' lack of protocols concerning which patients to treat first. The limited number of available beds and staff shortages play a significant role in decisions concerning which patients get treatment while leaving other ill patients without treatment.
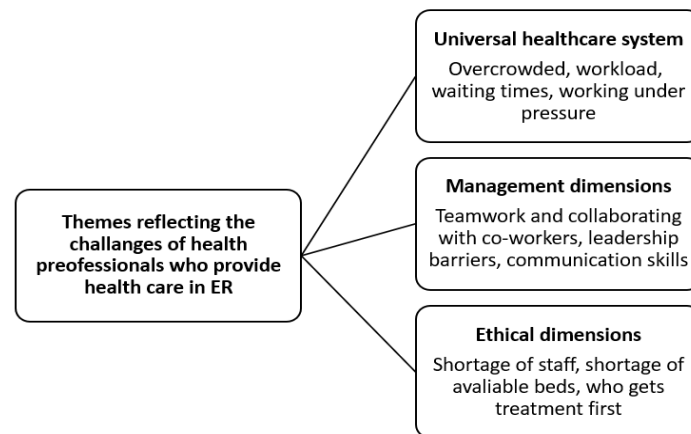
Figure 1.
Three themes emerged that described the challenges and experiences of health professionals.

5. Conclusions

Managing the emergency department environment is a serious responsibility that involves ensuring patients are safe and that they receive high-quality health services in systems that provide free health care. This is the main challenge faced by the health professionals who work in the emergency department at these hospitals. This current research illuminates the challenges faced and the experience of health professionals working in the emergency department in public hospitals in Saudi Arabia. The

results of the current study indicate that the overcrowding of patients and the quality of services, leadership and team effectiveness were major contributors to the strains faced by health professionals inside the emergency department. It is very important to understand that the emergency department have facilities in which a large health workforce is allocated. Great management is vital in order to successfully deliver high-quality health services to patients. A good manager knows how to manage the large number of staff inside the emergency department and ensure there are no conflicts between staff. Working as a team in environments such as the emergency department and emergency rooms is important to save patients' lives. In emergency rooms, different health professionals who have different backgrounds must work together as a team to take care of ill patients. A good leader and manager should create a positive workplace environment and provide strategies that ensure every employee knows their responsibilities in taking care of sick patients during emergency situations. Poor leadership and management are critical problems for the emergency department staff and could create conflicts and decrease patients' safety as well as lead to medical errors. Effective teamwork and communication are vital for the successful management of emergency rooms and the provision of high-quality care [16].

The results of the current study indicate that working as a team under pressure was one of the challenges faced by health professionals. Participant 8, a Filipino female and head of a nursing department, responded that "Everyone is abusing the emergency department and it is very crowded, and nurses are overloaded with a lot of multitasking." A possible reason for this response could be that the teams in these hospitals are self-managed, which has an impact on the health workers' performance. This study suggests that strong support from leaders is important to ensure that nurses and other healthcare workers support the effort to implement self-managed teams rather than challenge it. Supporting this, Participants 4, 8 and 13 reported that health workers will not do a good job of taking care of patients unless they are closely supervised. Similarly, Participant 7, a 33-year-old Saudi female nurse who has a bachelor's degree in nursing, responded "I did not receive support from my co-worker when things were not going well." When I asked the head of a department of nursing about this issue, she said that some nurses feel pressure to match other nurses' standards of performance and conduct. For example, one nurse may be disliked for being much more helpful than her assistants. This will lead to conflict between staff and disadvantage teamwork. This study indicated that a good team leader finds ways to maximize the advantages of teams and to minimize the disadvantages. Support and guidelines from immediate leaders can reduce pressure among health professionals working together in the emergency department. This is consistent with previous studies Lyubovnikova, et al. [17] and Healy and Tyrrell [18]. For example, one study performed in Ireland by Healy and Tyrrell [18] informed that stress and heavy workloads among emergency department staff can be reduced if there is good teamwork and good managerial skills [19]. In order for health professionals to work well as a team under pressure, good management and instruction are needed. It is very important to understand that nurses are not likely to provide support for one another without a leader's instruction. Another research study conducted in the United Kingdom by Lyubovnikova, et al. [17] reported that the sickness and absences of healthcare staff and patients' mortality can be lowered if there is real team membership at the organizational level.[17]

Another factor that was highlighted in the interviews was the lack of effective teamwork. Participants did not like the concept that they were required to work at any time without any assistance and they had a problem with their heavy workload. The respondents indicated that assistance from healthcare professionals and giving assistance to each other are essential ways to improve the quality of services. It appeared that the issues related to effective teamwork were combined by the lack of leadership and management. For example, Participant 5, a Filipino female, stated, "Enhance hospital leadership skills to increase job setting related to healthcare professional ability."

A possible reason for these responses could be that the managers and leaders of these hospitals did not know how team members (the health professionals) perceive and interact with one another and guide team members' behavior. Hospital management should provide a plan for health professionals to work as team to deliver emergency healthcare services in a timely and appropriate manner. Another

important finding was that participants reported that they did not know their responsibilities and tasks and they did not have the ability to make decisions under pressure.

The findings in current study suggest that there was a lack of clarity about team purpose, membership, and leadership among participants, who believe that they were unable to complete their work successfully due to lack of appropriate resources. However, the current approach showed by many participants can indicate to healthcare staff feeling like they lack support, and that management did not listen to their problems and therefore failed to discuss the best feasible way to solve team conflict. Hence, they feel disappointed when they need assistance from immediate supervisors or other hospital departments such as microbiology, imaging, or the IT department. Supporting this, Participant 7, a female Saudi nurse with a bachelor's degree in nursing, stated, "I am struggling to achieve my goals for patients and waste time working with poorly designed IT systems." This participant reported that when working with others, people should be willing to compromise.

Similarly, Participant 11, a male Saudi physician, said, "The professional health workers here did not work together as well-coordinated team." This suggests that professional health workers who worked in the emergency department at that hospital have disagreements that are not resolved appropriately. It is clear that a good manager is needed to provide guidelines on how to manage, develop and build effective teams. Supporting this, a Canadian study conducted by Oandasan, et al. [19] found that hospital management that supports effective teamwork will increase the quality of patient care and decrease workload among health professionals [20]. For health managers to feel empowered to support effective teamwork, it is important for them to understand the characteristics of workers who are not willing to work together and provide additional guidance and feedback to build effective teams.

This study finds that patient overcrowding and long waiting times were major contributors to the struggles faced by health professionals inside the emergency department. The issues of overcrowding and long waiting times in the emergency department appears to be related to the quality of the hospital's delivery of care, specifically when it is dealing with overcrowding and long waiting times. There are many reasons that may lead to the overcrowding of patients which vary significantly between health systems in different countries. The causes of the overcrowding of patients are not confined to the shortage of health professionals, but extend to other areas of health systems, such as hospital management, access to health services, and a lack of training and resources, all combined with a high number of patients. As the number of patients grows and there are no additional beds for them in the emergency department, obviously overcrowding in public hospitals occurs. This current study suggests that there is a need to make changes in public health systems and the existing coordination between the public and private health sectors has proved to be a generally ineffective strategy for addressing overcrowding in public hospitals.

The increase in patient numbers results in overcrowding requires a reassessment of the number of health workers and often demands an increase in health worker levels to deliver and provide care to patients. This indicates that overcrowding can have a profound impact on health professionals, especially on nurses' performance, and has a negative impact on their ability to provide good quality of care. For example, Participant 9, a female Saudi nurse, responded that too high workloads due to not enough healthcare professionals was one challenge that impacted her performance in her current job [3]. She stated, "Patients and their relatives are abusing the emergency department with unnecessary problems, and we are strained with heavy work." Supporting this, Participant 1, a female Filipino nurse, said, "I do not perform well under pressure". The impact of overcrowding does not remain within the hospitals' emergency department. It can have a detrimental impact on the health system in general. There is an urgent need to address problems relating to patient overcrowding, long waiting times, working under pressure and improving access to healthcare services by patients with serious illnesses or injuries that require around-the-clock specialized and intensive care. Patient overcrowding in the emergency department is a problem that can and should be solved.

The ethical dimensions category identified what specific challenges and difficulties within the emergency department could affect health professionals' ability to provide high-quality health services

for patients. Most of the participants stated their dissatisfaction with having to choose which patients to treat first due to patient overcrowding and a limited number of available beds and resources. The most important possible concerns that healthcare staff may face when deciding which patients to treat first can be discussed from the perspective of various ethical approaches. The most basic ethical concept that should be considered when deciding which patient to treat first is equity. Equity has two different dimensions. The first dimension is basic fairness, which is the equal distribution of the costs and benefits of a program among all eligible people. In the case of the emergency department, every patient with a serious illness or injury that requires around-the-clock specialized and intensive care should receive treatment. All resources should be distributed equally to every patient. The second dimension is redistribution, which means channeling the benefits of a program to disadvantaged populations, such as the ones who are in the greatest need [21]. Immanuel Kant, the famous deontologist theorist, emphasizes that all rules should be applied to all members of the community rather than to just some. In emergency department cases, some patients are unable to get treatment due to the unavailability of resources, which can be considered as the responsibility of hospitals and governments to provide. If there are no beds available at a public hospital, policymakers at those hospitals should cooperate with local health providers and transfer patients with serious illnesses or injuries to private hospitals that have available beds rather than let patients wait in the emergency room or for patient overcrowding to occur. The deontologist approach will again support the idea that everyone who needs them should have access to healthcare services, since the health system in Saudi complies with the moral duty that patients with serious illnesses or injuries should be provided with affordable health care.

The limited number of available beds combined with shortages of staff and other resources play a significant role in the decision concerning which patients get treatment and which do not. Participant 8, a Filipino female who was the head of a nursing department, responded that "one of the biggest challenges is to give one person life-saving ventilators and leave another without treatment." A possible reason for this response could be that in these hospitals the emergency department has insufficient capacity to deal with the number of patients admitted. This will lead to physicians having to decide which patients to admit and treat first as well as which patients will be denied critical care. This means that patients who are waiting in the emergency room or in the hallways of the emergency room will not get treatment until an inpatient bed is available. There is an urgent need to address problems relating to the lack of available resources, such as available beds in public hospitals in intensive care.

Policymakers in health systems have to review and improve hospital management and planning to raise the emergency department's bed capacity in order to improve patients' safety and possibly save their lives [22]. This suggests that professional health workers who work in the emergency department have heavy workloads, which may contribute to a poor quality of care and increase medical errors. Supporting this, an American study conducted by Pines and Hollander [21] found that waiting times and patient overcrowding are associated with poor quality of care due to the lack of treatment and long waiting time for patients to get treatment [23]. This is consistent with previous studies [24-26]. For example, one study conducted by Kulstad, et al. [25] reported that the overcrowding of patients is associated with increased medical errors [27].

The basic ethical concern for this situation is to provide available beds in a way such that all ill patients will have an opportunity to access health care. For example, if one public hospital does not have the required resources available, patients with serious illnesses or injuries will be excluded and will not have access to health care. Therefore, hospital management should use multiple ways to provide healthcare services to this patient. For example, transferring the patient to a different hospital which has the required resources available will increase the accessibility of health care to the patient. Since access to health care and getting treatment is a duty of the health system, providing enough resources to treat ill patients is considered as a moral action, according to deontologism. These findings suggest patients with serious illnesses should be identified early to avoid being sent to an overcrowded public hospital. Cooperation with the private health sector in the community should be actively encouraged and

formalized with agreements. Public and private hospitals should accept shared responsibility for healthcare services and be provided with enough resources to fulfill this responsibility.

The current study indicates that policymakers in health sector face challenges in attempts to standardize health systems and setting rules that support improved access to health care and reduce overcrowding. These findings indicate that hospital strategies that are poorly regulated to reduce overcrowding and waiting times have played a large role in influencing health worker, patient, and hospital management relations. Therefore, this study shows that any strategy targeted at reducing overcrowding and waiting times for patients must focus on addressing the prevalent issues within the health system. For example, the participants described how overcrowding puts severe pressure on the management of hospitals and on the relationships of health professionals. It was observed that most of the participants were frustrated with hospital strategies and procedures and informed that there is a need to improve hospital management in order to reduce tensions. It is therefore very important to take measures to reduce the pressures resulting from the consequence of overcrowding and long waiting times.

6. Implications

This research has provided insight into the issues faced by health professionals working in the emergency department, especially in public hospitals. It has also provided strategies to hospital administrators and policymakers in the health system to improve leadership in hospitals and provide health professionals with more precise guidelines on how plan, manage, cooperate, and build effective teams. The major contribution of this research rests on recognizing that overcrowding can severely check the ability of hospital administrations and health professionals to provide meaningful and positive treatment for patients. Therefore, one short-term strategy that can be taken to reduce the harmful impact of overcrowding is to better arrange and organize patients' admissions. This will provide the key elements of hospital management policies that can help with controlling overcrowding and improve patient outcomes as a long-term strategy to reduce overcrowding. It has also highlighted that in order to reduce some of negative outcomes associated with hospital overcrowding, contact and cooperation with local health providers and other public hospitals should be facilitated to the best extent possible and support from the health system should be utilized. This may lead to an expansion of services related to health care.

This study has shown that the overcrowding of patients in public hospitals has reached a critical level and needs to be reduced urgently to avoid a major crisis in the Saudi healthcare system. However, an increase in the number of beds or the construction of new hospitals will not be effective in meeting the immediate needs of patients, as they will take some years to happen. Other options, such, as cooperating with local health providers and transferring patients with serious illnesses or injuries to private hospitals that have available beds and making changes in the health system will need to be considered instead or in addition to the expansion of hospitals' capacity. The reality in many public hospitals do not have minimum waiting times and a large number of patients spend many hours in overcrowded waiting rooms. This study suggests that there is a need to apply a measurement of hospital waiting time as is done in other health systems, such as Australia and the United Kingdom, noting that each health system describes and measures waiting time differently. For example, in the health system in the United Kingdom, the primary measure of emergency department waiting time is the percentage of patients spending four hours or less in emergency departments, while in Australia the health system emergency department refers to the time from triage to first clinical contact. In the Australian health system, the recommended time for each triage category is resuscitation within seconds, emergency within 10 minutes, urgent within 30 minutes, semi-urgent within 60 minutes and non-urgent within 120 minutes. Therefore, setting minimum waiting times for patients in the Saudi healthcare system is recommended. This program has proven its ability to faster access and increase patient satisfaction. [28,29] Legislators in the healthcare system especially in public hospitals should legislate maximum patient ratios to reduce overcrowding and waiting times as well as to guarantee safe

patient outcomes. Hence, hospital management could look at supporting such a framework to assist healthcare providers to advance waiting time measurement strategies for their services.

The findings of this study demonstrate the failure of hospital management to take measures to relieve overcrowding in public hospitals, such as transferring patients to other local health care providers. For the Saudi government to reduce overcrowding, this study suggests there is a need to consider the implementation of long-term health system strategies and to implement rules that enable equity in treatment based on the patients' needs.

This research provides a rich picture of the lived experiences of health professionals working in the emergency department in Saudi Arabia and suggests that leaders and managers in public hospitals, especially in the emergency department area, need to adapt to a new working environment in which the definition of teamwork requires personal and behavioral adjustment. Moreover, this research has also found some critical topics for future study on the impact of patient overcrowding and misconceptions of teamwork that have multiple and increasing causes, mainly external to the health system itself. Some areas that require further research include the effects of new regulations implemented by the health system to analyze the impact of health system polices that aim to reduce patient overcrowding. Some other areas that require further research include the impacts of new policies implemented by the Saudi government to hire managers that have management education in public hospitals rather than hiring managers with medical degree.

Data Availability Statement:
The data presented in this study are available upon request from the corresponding author.

Author Contributions:
Abdullah Ghaleb Alshareef designed the study and was involved in analyzing data and writing the manuscript.

Transparency:
The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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