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Patients' Satisfaction with the Quality of Care in the Tunisian Private Hospitals during the Second Wave of COVID-19 Pandemic: Does Human Resource Planning Matter?

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Abstract

Human resources need planning to meet the firms' objectives and help them achieve advantages over their competitors. Therefore, the right management of the right people at the right time has the power and energy to embed sustainability across the organization not only in normal circumstances but also in turbulent and crisis times. As far as we know, no previous research has investigated the value of human resource planning (HRP) during a crisis period/time, like that of COVID-19. For this reason, a new approach is needed to explore the role of HRP in the context of crisis periods or disaster situations. Actually, it is in hospitals that human resource management (HRM) practices take on special meaning. However, the relationship between HRM and healthcare is very complex as the employees' behavior is directly correlated with the patient's satisfaction. During the outbreak of COVID-19, it became increasingly important to recognize the patient's satisfaction criteria regarding how hospitals serve the patients. The purpose of this paper is to evaluate the impact of the HRP on the patients' satisfaction during the outbreak of an imminent pandemic, like COVID-19. For this purpose, we developed two contrasting samples: private hospitals' directors (n = 85) and private hospitals' patients (n = 858). We used structural equation modeling to assess the links between human resource planning and the patients' satisfaction with the quality of care. In fact, our careful review of the literature provides us with a deep discussion on the practices of human resource planning. The results showed that some human resource planning practices are positively related to the patients' satisfaction while others are negatively related.

Keywords

Human Resource Planning, Patients' Satisfaction, COVID-19 Pandemic, Private Hospitals, Tunisia

1. Introduction

From the perception of corporate objectives, the human resource management (HEM) is responsible for ensuring that the right people are put in the right place and at the right time to achieve corporate plans with the highest levels of quality. Moreover, it is important to recognize that HRM function is a key element in the management of organizations (Macke & Genari, 2018). In fact, according to Nwankwo (2007), since the 1960s, business managers have continued to confirm that what counts for a firm is neither money nor the physical equipment but rather the human capital. In this vein, Ren et al. (2017) agree and justify the claims that the overall intention of human resource management is to ensure that the organization can achieve its objectives through its people. As a consequence, it is important to plan for the development of staff in all the units of the organization in order to guarantee the achievement of the stated objectives (Mishra, 2017). Actually, a series of recent studies has indicated that human resource planning (HRP) and organizational objectives are closely intertwined, as the former is an indispensable management function for the achievement of the latter (Ibojo, 2012). It is therefore evident that since all resources are essential for an organization, human resources need to be correctly planned for the coordinative function of attaining organizational goals. In fact, it seems clear that the process and the system improvements of the HRP involve benefits to the HRM functions and to the organization as a whole (Turner et al., 2018). Consequently, human resource management is a significant management tool for the community, such as researchers and practitioners as it provides guarantees against many uncertainties in the future of organizations (Carnevale & Hatak, 2020). For instance, it can meet the employees' needs, avoid an over-supply of personnel, rationally predict the company's future manpower needs, and avoid cost errors (Mathis & Jackson, 2012). Therefore, it can be said that planning for people becomes significant when job requirements specify scarce skills and capabilities (Ugwuowo & Mcclean, 2000). It appears that qualified and skilled people have become rare and HRP has become a necessity for long-term survival. It would seem that human resources need planning to meet the company's objectives and help it achieve advantages over its competitors (Minbaeva et al., 2017). However, there is no denial that HRP plays a challenging role during "normal" times, let alone a natural disaster or other sudden events occur. It should be also emphasized that the right management of the right people at the right time has power and energy to embed sustainability across the organizations (Opatha, 2019) not only in a normal circumstances but also in turbulent and crisis times. As far as we know,

no previous research has investigated the value of HRP during a crisis period/time, like in that of the COVID-19 pandemic. Therefore, a new approach is needed to explore the role of the HRP in the context of crisis periods or disaster situations. "Severe Acute Respiratory Syndrome coronavirus type 2 (SARS-CoV-2)," responsible for an infection termed the coronavirus disease (COVID-19), is a recently discovered pathogen in humans. Starting from the late December 2019, the pandemic speedily spread to the rest of the world along the main intercontinental air routes. On January 30, 2020, the World Health Organization (WHO) declared COVID-19 a public health emergency of international concern, and on March 20, 2020, due to the devastating number of new cases reported globally, the WHO declared it as a pandemic. At the time of drafting this manuscript (March, 2021), the WHO reported 114,763,547 infections and 2,544,519 deaths. In Tunisia, on March 01, 2021, there were officially 233,277 COVID-19 confirmed cases, including 8001 deaths and 198,006 recovered. Moreover, it is worth noting that the COVD-19 pandemic is a global pandemic that has consumed public and private life since the beginning of 2020, however, it should not be forgotten that it is different from any other disaster or crisis experienced in decades, because it is declared a highly infectious disease, with no cure and no vaccination. According to Vardarlier (2016), the HRP became even more important during the crisis period, as it constitutes an essential dimension of the crisis management. At the same time, it is true to say that the hospital is one of the most important health care institutions because it is the core source of health services, particularly during an outbreak like the COVID-19 pandemic (Aljaberi et al., 2017).

Even though many hospitals' managers are almost aware of the forces that drive the changes in the organizational environment (Aberese-Ako et al., 2018), there is a little evidence that the techniques and practices of the HRP (McPhail et al., 2008) help managers face the predictable changes, quickly identify the gaps in the human resources and addressed the real needs of the health institutions. However, the managers of such health institutions do not seem to believe in or be aware of the advantages they can gain from the HRP. In fact, according to Obi (2012), the HRP is opined as the core element of a business that helps to shape and lead the future of any organization through the use of its people. Accordingly, a successful HRP could result in high production and long-term future growth for businesses. One could visualize that, it is in hospitals (public or private) that human resource management practices take on special meaning. Indeed, it might be argued that the relationship between the HRM and healthcare is very complex as the employees' behavior is directly correlated with the patient's satisfaction (Gile et al., 2018). In fact, the patients' satisfaction with the quality of care has emerged as a key component that determines a hospital's competitive position and survival (Oppel et al., 2016). However, in practice, despite the existence of unused capacities of resources, the patients' dissatisfaction indicates the improper allocation of the hospital's resources, mainly the human

ones, since they are rare and non-substitutable (Harvey & Turnbull, 2020). Furthermore, there is no doubt that, during the outbreak of the COVID-19 pandemic, it is becoming increasingly important to recognize the patients' satisfaction criteria for how hospitals serve the patients (Shirazi et al., 2020). It should also be emphasized that the patient's satisfaction with the quality of care refers to the satisfaction of his/her needs and inner desires with the provision of the hospital services in order to achieve the goal of providing health. It is by now generally accepted that, in health care politics, human resources are one of the most crucial components and is an essential element if health care systems and services need to be improved (Dal Poz et al., 2009). Although the process of the HRM is well organized in the literature, it faces a lot of challenges when applied (Tambe et al., 2019). Therefore, it is worth pointing out that the HRP is a process of analyzing an organization's human resource needs under changing conditions and developing the activities necessary to satisfy these needs (Aykan, 2017). Such challenges could prevent managers from correctly applying the HRP in organizations and benefit from its significant advantages (Saad, 2013). Moreover, compared to passive operational factors, human resources are very significant as they provide a lot of flexible power (Anyim et al., 2012), it might be argued that a well planned, nourished and revitalized human resource process can deliver goods which, in turn, can attain the twin goals of the organization, especially during the crisis period. The relationship between human Resource Planning and patients' satisfaction with the quality of care provided by private hospitals in Tunisia during the COVID-19 pandemic is at the centre of this article.

Moreover, it should be acknowledged that private hospitals have strong competition in attracting the patients since, like any other competitive environment, they seek to distinguish themselves in their clients' minds and make sure their patients leave the hospital satisfied (Janet & Bronya, 2019). In fact, the non-random selection of the Tunisian private hospitals is justified as follows.

The COVID-19 pandemic has posed a challenge for the private health care sector worldwide, including Tunisia in particular for several reasons:

Firstly, according to the Tunisian Ministry of Health, on October 21th, 2020, beds in intensive care units (ICU) in the Tunisian public hospitals were about 80% full as many new COVID-19 cases surged.

Secondly, according to the Tunisian ministry of health, on October 26th, 2020, the rapid rise of the number of COVID-19 cases across Tunisia caused the saturation of beds in public hospitals by the end of October 2020.

Thirdly, according to the Secretary-general of the Union of Liberal Medical Specialists, on 16th October 2020, the average cost of the hospital care for COVID-19 in private clinics went up to 45 thousand dinars per patient and even more, depending on the number of days spent in the Intensive Care Unit (ICU).

Fourthly, according to the Tunisian current prime, on October 19th 2020, patients of COVID-19 who could not find a place in a public hospital would be treated in a private clinic at the government's expenses.

Finally, the health crisis has had a significant impact on private clinics, whose revenues fell by 80% due to the postponement of several surgeries and the absence of foreign patients (La Presse.tn on the 13th of October, 2020).

The rest of this paper is structured as follows. The second section discusses the theoretical background. The third section proposes hypotheses, the fourth section describes our research methods; the next section presents the results of the data analysis carried out using the PLS-Graph 3.0 and SPSS version 17.0, we then conclude by discussing results and finally, we present implications, limitations and future research perspectives.

2. Theoretical Foundation

2.1. Human Resource Planning (HRP)

2.1.1. Definition

HRP is an action of making decisions in advance for suitable employees that possess the required skills, knowledge and abilities to deliver organisational goals and objectives. It is a compound of activities that guarantee the availability of adequate number and competences of staff which an organization needs both for present and future requirements (Maduabum, 1998).

HRP appoints how much personnel are needed by organizations in order to achieve their strategic goals (Armstrong, 2012). It is about matching the number and skills of employees to business needs in the longer and/or shorter term. It allows managers to answer two central questions namely: how many employees? And what sort of employees? (Saad, 2013).

HRP is a process of analyzing an organization's human resources need under changing conditions and developing the activities, necessary to satisfy these needs (Walker, 1980). According to Obi (2015) it implies a technique of methodical assessment of the "exact number of persons at the correct time and in the appropriate positions" that can complete organisational task in a way to achieve set goals.

2.1.2. Practices of Human Resource Planning

Purwadi (2012) provides a deep discussion on the practices of human resource planning which can be outlined as followed:

1) Human Resource adjustment for lack

When there is a lack of workers, companies should not blindly go for recruitment. According to Purwadi (2012) there are three alternative methods for human resource adjustment that deserves to be noted:

a) Increasing overtime work

Overtime work (i.e., long working hours) is defined as working for a length of time that exceeds standard working hours (Bannai & Tamakoshi, 2014). Overtime has long been used as a major management tool for healthcare providers to meet staffing needs due to shortages (Tanaka et al., 2008). Organizations generally use overtime to fully utilize their internal human capital despite its potential downsides (Ko & Choi, 2018). Employers demand paid and unpaid overtime

hours to adjust the amount of labour input to demand fluctuations without changing the number of employees and thus to avoid hiring or firing costs.

b) Increasing part-time employment

There is no official definition of part-time work; however it is commonly as employment for less than 30 hours per week (Branine, 1999). Part-time workers earn lower mean hourly wages than full-timers and are less likely to receive most varieties of fringe benefits (Ehrenberg et al., 1988). When companies face a lack of man-hours, they hire part-time employees to overcome man-hours shortage (Purwadi, 2012).

c) Recruitment full-time employment

Companies should opt for recruitment as the last alternative when the lack of man-hours cannot be overcome by increasing overtime work and increasing part-time employees. Two factors should be considered during the recruitment process referred to as "qualitative and quantitative factors of employees recruited".

On the one hand, there are many procedures for measuring the qualitative factor, for hiring decisions various pre-employment tests (psychology test, written test, etc) and detailed interview must be passed to gather information about future employees (their educational background, their family background, etc.).

On the other hand, the quantitative factor refers to the numbers of employees should be hired, which is determined by comparing the desired man-hours, normal potential man-hours, and overtime (Purwadi, 2012).

2) Human Resource adjustment for redundancy

The redundancy condition occurs when the numbers of potential man-hours is bigger than desired man-hours. In this condition, companies made a wrong decision if they appeal for discharge them directly because they already have good working skill. Briefly, during the redundancy condition, company must keep all of its employees (Purwadi, 2012). At that time, employees have to know that they must do something offered by the company for example: join a training program, after which they will be reallocated in the other department or transferred from one subsidiary to another within the same company group (Purwadi, 2012). In recent times, according to Koike (1988) the most frequent methods of employment adjustment are cutting overtime and transfer. Redundancy makes the productivity reduce. Company must pay them even though they don't contribute as big as their potential effort for company. It is really tough to resolve this problem (Purwadi, 2012).

To handle this problem, companies use some alternatives such as:

a) Firing temporary workers

During the redundancy condition, companies go for firing temporary workers as the first alternative. It is possible for the company to hire them again when the company's condition becomes better.

b) Cutting overtime work

When redundancy of manpower occurs, companies will cut overtime work. Cutting overtime work will not cause any side effect at all, for this reason cutting

overtime work is the best way for adjusting manpower.

c) Transfer to other company within company group

In order to reduce the employees' level, it was very encouraging for the company to make a geographical transfer of some employees to other companies within the company group. Obviously, transfer procedure is done through supervisors who hold discussions to decide which employee should be transferred.

d) Lay off

When redundancy of manpower occurs, companies should appeal for firing permanent employees temporary.

e) Voluntary retirement

When the company condition is getting worse, company asks employees to be voluntary retirees. They retire before the official retirement age.

f) Mandatory retirement

When the company's condition is going from bad to worse and when there is no way for company to keep all employees, a sole decision has to be taken by the company namely" compel (oblige) some employees to retire. Probably, to bring new blood into the organization, companies have to opt for building a relationship with universities to recruit freshly graduated students. Mandatory retirement allows employers to force employees to retire at a certain age. Barker and Clark (1980) insisted that mandatory retirement be a necessary policy for firms to get rid of older workers, even if they wish to work longer.

3) Develop Training

Training that employees receive can be divided into two categories namely "on the job training" and "off the job training" (Purwadi, 2012).

a) On the job training

"On the job training" is a kind of training they receive while doing their job. In other words, it is training by doing job. The purpose of "on the job training" is to practice a wider range of their job in the real world (Purwadi, 2012).

It is perceived as more practical and meaningful. It is not formally structured, planned or prepared. It may arise in an unplanned manner during observation. The trainee may be learning by observation (Booth, 1995). It is perceived to be more real life, observational and manipulative, more immediate, more time pressured, more just in time, improvised, more incidental and more one to one in nature (Harris et al., 1998). Job instruction techniques, job rotation, work shifts, coaching training and apprenticeship training are common forms of "on the job training" method (Van der Klink & Streumer, 2002).

b) Off the job training

"Off the job training" is limited to the initial and periodical training which are held according to the schedule for acquiring intellectual skills. It can provide a theoretical background to the employees with ranging experience (Purwadi, 2012). Furthermore, it is planned programme of lecturers, seminars, conferences and tutorials (Booth, 1995). It is perceived to be more theoretical, less up to date in method and equipment; more detailed and deliberated (Harris et al., 1998).

4) Develop Promotion System

A growing body of literature pertaining to promotion (e.g., Buckman et al., 2018) has suggested that there are two categories of promotion:

a) Internal promotion

Internal promotion is the process of promotion where the employee who moved to higher position comes from among the employees itself (Purwadi, 2012). Lazear (1989) and Lazear & Rosen (1981) postulated that internal promotion can be used as an incentivizing mechanism by providing workers an opportunity to compete for promotion to the next level of their job hierarchy. The individuals who reach an optimal level of performance are then awarded the new position (Devaro, 2006).

b) External promotion

To fill the job available, company recruits new employees from outside of employees itself. External promotion can give a good chance toward a successful exploitation of new ideas from outside. But, new employees must also be trained to fit into the current company condition (Purwadi, 2012). External candidates do not endure the process of being internally promoted and are perhaps more optimistic toward the possibility of future promotion (Acosta, 2010).

5) Retirement System

Retirement program should be designed so that it can attract and motivate employees. Retirements programs are designed to meet an objective namely provide employees with adequate retirement income (Purwadi, 2012). Retirement systems are determined based on years of labor or on age in position (Lee, 2009). It is notable that, retirement may take place because of work-related medical disabilities (**disability retirement**), because of individual preference to retire before the mandatory age limit for a variety of reasons (**early retirement**), or because of a fixed-age limit for work in the industry (**normal retirement**) (Haynes et al., 1978).

2.2. Patients' Satisfaction

2.2.1. Definition

Patient satisfaction seems as a continuous variable resulting from emotional reactions and cognitive evaluations of distinct dimensions of the health care provided compared to an individual frame of reference (Labarere et al., 2001).

Furthermore, patient satisfaction is a construct that includes a personal evaluation of health care services and providers. The differences in satisfaction reflect the realities of care to a substantial extent (Ware et al., 1983), and such information can provide a dependent measure of service quality (Pascoe, 1983).

It is interesting to note that, patient satisfaction is "The degree to which the individual regards the healthcare as useful, effective and beneficial (Lebow, 1983). Patient satisfaction has been defined by Pascoe (1983) and Coyle (1999) as an evaluation and reaction based on the fulfillment of expectations.

Likewise, a more satisfied patient may be more likely to return to a hospital and to engage in positive word of mouth (Bowers et al., 1994). However, dissa-

tisfaction leads to harmful negative word of mouth, complaints, second opinions, and repeated investigations.

2.2.2. Dimensions of Patients' Satisfaction

Dimensions of patient satisfaction according to (Tucker & Adams, 2001) are predicted by factors relating to access, communication and outcomes.

1) Access

Access takes into account patients' ability to acquire their health care and highlights barriers to obtaining that care (Tucker & Adams, 2001). Access refers to health service availability (service is available when it is required), and is operationally pertains to the number of patient-physician contacts (Turner & Pol, 1995), waiting times, convenience and availability associated with healthcare experiences (Tucker, 2002).

2) Communication

Patients are sometimes reluctant to request information or express their opinions and desires regarding care. Communication between healthcare providers and patients is essential to medical care (Tucker & Adams, 2001).

According to Joos et al. (1996), an effective communication assists decision making and improve patient understanding, satisfaction and cooperation.

Communication is the extent to which the patient is heard, kept informed through understandable terms, allowed social interaction and time during consultation and provided psychological and non-technical information (Tucker, 2002). Communication counseling, advice and guidance from providers all serve as gauges of patient-provider communication (Tucker & Adams, 2001).

3) Outcomes

Outcomes are defined by Tucker (2002) as the change in physical health status directly attributable to the healthcare experience and efforts. Service quality, accordingly, is the degree to which care was humane and competent (Tucker, 2002).

Overall, if the service provider's competence is perceived high then levels of satisfaction also increase. Competence strongly influences patients' service quality assessments (Andaleeb, 1988). Andaleeb (1988) added on that, the manner in which staff interacts with the patient and staff sensitivity to the patient's personal experience seems to be essential.

3. Hypothesis Development

3.1. Overtime Work and Patients' Satisfaction

Previous researches have reported that long work hours of healthcare providers have adverse consequences for their patients (Gaba et al., 1998).

Rogers et al. (2004) found that "the risks of making an error were significantly increased when healthcare providers worked overtime". Alt-White (1988) reported that improved working conditions, including less overtime, may improve the quality of care. According to Griffiths (2014), persistent concerns have been raised about negative impacts on the quality of care associated with working

longer hours. Josten et al. (2003) found that healthcare providers working 9-hr versus 8-hr shifts were on average more fatigued, had more health complaints, were less satisfied, and had slightly poorer performance. Thus it is expected that: **H1:** increasing overtime work is negatively related to patients' satisfaction.

3.2. Part Time Employment and Patients' Satisfaction

Part-time employees work fewer hours in total and therefore are likely to experience less pressure in coordinating work (Havlovic et al., 2002). Prior research has found part time professionals more productive because they often work more hours than they are paid for, Thus increasing the productivity of the group (Mason et al., 1991).

As outlined by Wheeler et al. (1990) there are additional benefits to having part-time healthcare workers on staff. Part-time healthcare providers add to accumulated wisdom of a practice, provide additional flexibility in scheduling and expand week call group. In addition, academic part time physicians/nurses may also contribute to their practices by bringing expertise in specific areas of medicine. Although routine access to part time providers is limited because of restricted bookable clinical hours (Fairchild et al., 2001).

Thus it is expected that: **H2:** Part-time employment is positively related to patients' satisfaction

3.3. Full Time Employment and Patients' Satisfaction

Full time healthcare providers were significantly less satisfied than part-time with patient care issues, personal time, administrative issues, and their jobs overall, and they noted significantly more stress than part-time physicians (McMurray et al., 2005).

Patients of full-time when compared with those of part-time healthcare workers, had lower outcomes in terms of the use of medical care, their satisfaction with their physicians and the quality of care they received (Fein & Garfield, 1991).

Thus it is expected that: **H3:** Full-time employment is negatively related to patients' satisfaction.

3.4. On the Job Training VS off the Job Training and Patients' Satisfaction

The "on-the-job training" session gains more importance than "off the job training" since it helps attendants to directly apply the knowledge gained into actual practice (Elhanafy & Ahmed Elshazly, 2021).

Healthcare provider who received "on the job training" sessions shows better practical achievement more than those who didn't participate. Charles et al. (2020) showed an improvement in the clinical practice of health care providers after attending an "on the job training" program. Health workers are often asked to perform task beyond their scope of practices, but without an adequate "on the job training" can lead to frustration and demotivation (Manongi et al., 2006)

which creates concerns about the quality of health services provided.

Thus it is expected that: **H4:** "on job training" has a positive effect on patients'satisfaction more than "off the job training".

3.5. Internal Promotion VS External Promotion and Patients' Satisfaction

Health workers disclosed that limited career development opportunities are a demotivating factor (Kotzee & Couper, 2006).

Internal promotions can provide an even stronger motivation for effort than short term incentive pay (e.g., annual bonus) because internal promotions result in larger and more persistent pay increase relative to short term incentive (Campbell, 2008). In addition, performance-based internal promotion provides a powerful motivating force for individuals to exert effort (Milgrom & Roberts, 1992).

Thus it is expected that: **H5a:** internal promotion is positively related to patients'satisfaction.

In an external promotion, high performing individuals from premium organizations reduce the short-term decrease in performance during the new job acclimation period for both the employee and the organization (Groysberg et al., 2008). Furthermore, Drazin and Rao (2002) indicated that lower performing organization will hire employees from their competitors (an external promotion) in hopes of the new hire transferring their elite skills to the current underperforming employees which may impact the overall quality of patient care.

Thus it is expected that: **H5b:** External promotion is positively related to patients' satisfaction.

3.6. Retirement System and Patients' Satisafaction

Older employees, seeing a "normal" retirement ahead, tend to value their jobs more than their younger colleagues (Warr, 1992).

Early retirement (for preferences or diabilities) incentives providing workers with adequate retirement income (Hardy & Quadagno, 1995) have been implemented in contexts where the older worker was perceived to have reduced ability to learn and adjust (Maurer et al., 2001). It is a necessary employee action to deal with reduced productivity of disabled workers and promoting opportunities for alternative of flexible retirement (Lazear, 1979).

By conveying such explicit (retirement incentives) and implicit (stereotype of older workers as less able to learn) messages, organizations are likely to reduce older workers' affective commitment because these employees are likely to feel less competent and valued (Herrbach et al., 2009) that may lead to the achievement of the healthcare organisation's goals such as positive patients outcomes.

Thus it is expected that: **H6:** retirement system is positively related to patients' satisfaction.

In this paper, survey data are used to test hypothesis. A questionnaire investigation is executed in order to clarify the relationship between human resource

planning's practices and patients' satisfaction.

4. Research Methodology

4.1. Sample and Data Collection

As it is a study carried out during the pandemic period, where the government restriction policy was still ongoing, this made access to the Clinics' Executive Directors as well as their patients more difficult. Under such circumstances and for prevention reasons (a higher risk of COVID-19 infection via contact transmission), the data collection was done using the online method.

For the primary data, a self-administered questionnaire consisting of close-ended questions was e-mailed to the clinics' executive directors on the 3rd of September 2020. They were the target respondents for the human resource planning constructs.

The survey was designed in English, based on the available literature, then, translated and validated in French since it is the most used language in the health field in Tunisia. In fact, the respondents were asked to indicate their extent of agreement with statements referred to the human resource planning, typically in a seven-point Likert scale ranging from 1 "strongly disagree" to 7 "strongly agree" ("see Table 1"). The survey comprised 22 statements in French made accessible through a link.

The participants were given brief information about the study as well as its current aim. In fact, for this purpose, a joint letter was sent via e-mail to the participants to build awareness of the survey and encourage participation. Then, a pilot test was run with eleven respondents through personal networks to evaluate the timing, readability, relevance, and acceptability, so that linguistic adaptations could provide greater clarity and ease of understanding.

The questionnaire was considered easy to read, relevant and acceptable, and required no longer than 5 min to be answered. Of the 142 questionnaires sent, a total of 92 were completed, which corresponds to a response rate of 64.78 %. However, seven of these responses had to be excluded because of missing data, resulting in a total of 85 usable questionnaires. Private medical clinics located in 19 Tunisian Governorates listed in the national portal of the ministry of health (Tunisia) were included in the study.

Secondly, the data on our dependent variable, the namely patients' satisfaction with the quality of care, were obtained from the patients based on their experience. In fact, they were asked to rank the degree of satisfaction they got from their healthcare providers. The data were collected via an anonymous link distributed on social media (Facebook and Instagram) and through personal networks. The invitation to participate was circulated through multiple groups on social media.

The questionnaire was created in Google Forms. By clicking on the link, they were taken to the opening page of the online survey. There were a series of questions to answer. Patients were asked to respond by indicating their level of satisfac-

tion on a 7-point Likert scale ranging from "very dissatisfied" to "very satisfied".

The survey, which consisted of ten questions, took no longer than 10 - 15 min to complete. It was mandatory to answer all questions and the survey was anonymized and did not contain any identity information.

Out of 1214 persons clicked on the link and responded to the survey, 144 of these responses were deemed unusable due to a large amount of missing data. Therefore, a total of 858 usable questionnaires were included in the analysis. The patients' questionnaire was categorized into two parts (A and B). The first part dwelt mainly on the respondents' demographic particulars (age, gender, marital status, nationality and length of stay) while the second section was on the focus of study.

4.2. Development of Measures

4.2.1. The Independent Variable: Human Resource Planning

To our knowledge, there are no existing measure items for human resource planning in the published literature, therefore new items were generated based on a literature review. In this context, Purwadi (2012) provided a deep discussion on the practices of human resource planning. Therefore, inspired by Purwadi's (2012) research work, we could develop an instrument to measure the human resource planning (HRP), which can be accessed through five attributes (constructs): 1) the human resource adjustment for lack, 2) the human resource adjustment for redundancy, 3) the developed training, 4) the developed promotion, and 5) developed retirement system.

In fact, 1) the human resource adjustment for lack consists of nine items capturing three components (three items for increasing overtime work (IOTW), three items for increasing part time employment (IPTE) and three items for recruitment for full time employment (RFTE).

2) The human resource adjustment for redundancy is excluded from the current study because the context is different (the COVID-19 pandemic) we cannot talk about a redundancy condition.

3) Develop training consists of five items capturing two components namely: on the job training (ONJT) and off the job training (OFJT). We have used three items to measure on the job training and two items to measure off the job training.

4) Develop promotion consists of four items capturing two components namely: internal promotion (IPR) and external promotion (EPR). We have used two items to measure each one.

5) The retirement system consists of four items capturing three components referred to as disability retirement (DIR), early retirement (EAR) and normal retirement (NOR). We have used a single item to measure the first two components and two items to measure the last two.

4.2.2. Dependent Variable: The Patients' Satisfaction with the Quality of Care

To measure the patients' satisfaction with the quality of care, we used a scale de-

veloped by Tucker and implemented by Tucker and Adams (2001) which includes three components, namely: 1) Access, 2) Communication and 3) Outcomes.

1) Access (ACCE): five questions were used to measure the patients' assessments of access. In fact, patients were asked to rate the convenience of their treatment location, the convenience of the available hours for treatment, access to care when needed, in-office waiting times and the length of time between making their appointment and the day of their treatment.

2)Communication (COMM): to assess the patients' sentiments regarding communication during their health care encounters when they asked to rate their provider's explanations of health care procedures and of the medical tests, the attention paid them, and the reassurance and support given by their providers.

3) Outcome (OUTC): patients were asked to rate the outcome of their health care and how much they felt that they were helped. (All construct measurement items are listed in "Table 1".

Table 1. The questionnaire design.

Independent variable: Human resource planning (Purwadi, 2012)
1) Human resource adjustment for lack
a) increasing overtime work (IOTW)
• We are used to work overtime regularly.
• We are eligible for overtime (working over 8 hours a day, working during holidays or weekends).
• We are used to provide higher rate of pay for overtime than for normal working hours.
b) Increasing part time employment (IPTE)
• We are used to hire part-time employees.
• We are allowed to offer similar benefits for full-time and part-time employees.
• We go for hiring part time employees instead of full-time.
c) Recruitment full time employment (RFTE)
• We appeal for recruitment full time employees as the last alternative when the lack of man-hours cannot be overcome by increasing overtime work and part-time employees.
• For hiring decisions, various serious pre-employment tests and detailed interview are usually passed to gather information about future full-time employees.
• The number of full-employees should be hired is calculated by comparing the desired man-hours, normal potential man-hours and overtime.
2) Develop training
a) on the job training (ONJT)
• Healthcare professionals training is more "a just in time" training occurring during clinical practices.
• Our employees training sessions are more practical, improvised and not formally structured, planned or prepared.
• Health workforce training in our establishment is combined with the pressure to perform within time limits.
b) Off the job training (OFJT)
• We are used to provide a theoretical, planned and dedicated training consists of seminars, tutorials, lecturers and conferences.
• We are used to offer a training program method which conducted away from the actual workplace (no pressure, no time limits), where employees could unwind and been released from job related stress.

Continued

3) Develop promotion

a) internal promotion (IPR)

- Staff members who get promoted (moved to higher position) come from among the employees itself.
- We are used to encourage employees to remain for a long time in the company by offering internal promotions.

b) external promotion (EPR)

- We can't always promote from within our organisation, sometimes, staff member who get promoted come from outside of employees itself.
- External promotion is an issued option for us to give a good chance to adopt new ideas from outside and to bring new blood to the company.

4) Retirement system

a) disability retirement (DIR)

- Because of failing health and disabilities, we decide to compel some of health providers to retire before the official retirement age.

b) early retirement (EAR)

- Stressful experiences, a lack of job satisfaction, less social support from family and others and excessive work load forced some of our healthcare workers to choose an early retirement.

c) normal retirement (NOR)

- We are keen to designe a retirement program (for normal retirees) that can attract, motivate and provide employees with adequate retirement income.
- We are keen on an equity distribution of an appropriate retirement income (after normal retirement) which depends on pension program, years of contribution and occupation.

Dependent variable: patients' satisfaction with the quality of care (Tucker & Adam, 2001)

1) Access (ACCE)

- To what extent are you satisfied or dissatisfied with the convenience of location of treatment.
- To what extent are you satisfied or dissatisfied with the convenience of the available hours for treatment.
- To what extent are you satisfied or dissatisfied with the access to healthcare when needed.
- To what extent are you satisfied or dissatisfied with the in office waiting time.
- To what extent are you satisfied or dissatisfied with the length of time you wait between making an appointment and the day of your visit.

2) communication (COMM)

- To what extent are you satisfied or dissatisfied with the provider's explanation of health care procedures.
- To what extent are you satisfied or dissatisfied with the provider's explanation of medical tests.
- To what extent are you satisfied or dissatisfied with the attention provider gives to what you have to say.
- To what extent are you satisfied or dissatisfied with reassurance and support offered to you by health care providers.

3) outcomes (OUTC)

- To what extent are you satisfied or dissatisfied with the outcomes of your health care (how much you were helped).

5. Data Analysis and Results

PLS-Graph 3.0 and SPSS version 17.0 were used to assess the links between human resource planning and patients' satisfaction with quality of care, and bootstrapping (using PLS-Graph with 150 samples) used to evaluate the significance of the model paths. First, the measurement model was assessed. Ideally, the item

loadings should exceed 0.70 but even 0.60 acceptable if there are additional indicators (Chin, 1998). In fact, the Item loadings for all the other constructs ranged from 0.639 to 0.991 exceeding minimum thresholds "**Table 2**".

Descriptive statistics (i.e. mean and standard deviation (SD)) for each construct are shown in "**Table 3**", "**Table 3**" also shows that composite reliabilities range from 0.905 to 0.984while the average extracted variance (AVE) varies between 0.615 and 0.798, exceeding the recommended cut-offs (Chin, 1998). Moreover, the construct AVEs are greater than the variance shared between the constructs "**Table 4**", which satisfies the criteria for discriminant validity (Chin, 1998).

Italicized items represent the square-root of the variance shared between the constructs and their measures. The off-diagonal elements are the correlations among the constructs.

Decomposed model. Regarding the structural model, the results showed that the decomposed model accounts for 0.774 of the variance observed for the patients' satisfaction average "**Figure 1**".

For human resource adjustment for lack, increasing overtime work ($\beta = -0.308$, $\rho \leq 0.05$) was significantly and negatively correlated vis-à-vis the patients' satisfaction while the increasing part-time employment ($\beta = 0.081$, $\rho \leq 0.05$) is significantly and positively correlated vis-à-vis the patients'satisfaction. On the other hand, recruitment full-time employment ($\beta = 0.202$, $\rho \leq 0.01$) is significantly and negatively correlated.

As for the training development, both "on" and "off" the job training are significantly and positively correlated with the patients' satisfaction ($\beta = 0.164$, $\rho \leq 0.05$) and ($\beta = 0.025$, $\rho \leq 0.05$) respectively although the positive impact of the "on the job training" is higher than the "off the job training". Then, for the development promotion, the internal promotion ($\beta = 0.184$, $\rho \leq 0.05$), it is significant and positively correlated vis-à-vis the patients' satisfaction while the external promotion ($\beta = -0.413$, $\rho \leq 0.05$) is significantly and negatively correlated vis-à-vis the patients' satisfaction.

Finally, for the retirement system, any disability, early or a normal retirement is significantly and negatively correlated vis-à-vis the patients' satisfaction ($\beta = -0.051$), ($\beta = -0.055$) and ($\beta = -0.137$), respectively.

The assessment of the composite model. Next, the latent variable scores representing the dimensions of the human resource adjustment for lack, such as training development, promotion development and retirement system are extracted and used to assess the composite model. Being consistent with the recommended guidelines, the indicator weights for all the ten dimensions are examined "**Table 5**" and fond to be significant vis-à-vis their respective constructs at $\rho \leq 0.05$ (Chin, 1998; Petter et al., 2007). The results also showed that the on the job training, is the most important dimension in terms of relative importance.

Moreover, the study results provided strong empirical support for the decomposed model, accounting for 0.774 of the variance observed for the patients'

Table 2. Item loadings.

Constructs	Item loadings
Increasing overtime work (IOTW)	
IOTW1	0.639
IOTW2	0.962
IOTW3	0.991
Increasing part-time employment (IPTE)	
IPTE1	0.889
IPTE2	0.718
IPTE3	0.707
Recruitment full time employment (RFTE)	
RFTE1	0.814
RFTE2	0.844
RFTE3	0.799
On the job training (ONJT)	
ONJT1	0.789
ONJT2	0.812
ONJT3	0.845
Off the job training (OFJT)	
OFJT1	0.666
OFJT2	0.846
Internal promotion (IPR)	
IPR1	0.763
IPR2	0.680
External promotion (EPR)	
EPR1	0.820
EPR2	0.866
Disability retirement (DIR)	
DIR1	0.854
Early retirement (EAR)	
EAR1	0.855
Normal retirement (NOR)	
NOR1	0.932
NOR2	0.910
Patients' satisfaction average (PATSAT)	
ACCE1	0.970
ACCE2	0.843
ACCE3	0.859
ACCE4	0.867
ACCE5	0.888
COMM1	0.833
COMM2	0.857
COMM3	0.884
COMM4	0.881
OUTC1	0.875

Table 3. Descriptive statistics, composite reliabilities (CR) and average variance extracted (AVE).

Constructs	Mean	SD	CR	AVE
Increasing overtime work	5.922	0.661	0.922	0.653
Increasing part time employment	5.703	0.758	0.942	0.615
Recruitment full time employment	5.804	0.681	0.981	0.774
On the job training	5.864	0.664	0.912	0.771
Off the job training	5.780	0.900	0.905	0.747
Internal promotion	5.923	0.696	0.936	0.707
External promotion	5.958	0.623	0.984	0.798
Disability retirement	6.035	0.571	0.952	0.752
Early retirement	6.022	0.536	0.945	0.760
Normal retirement	6.075	0.512	0.922	0.762
Patients' satisfaction average	5.909	0.351	0.915	0.736

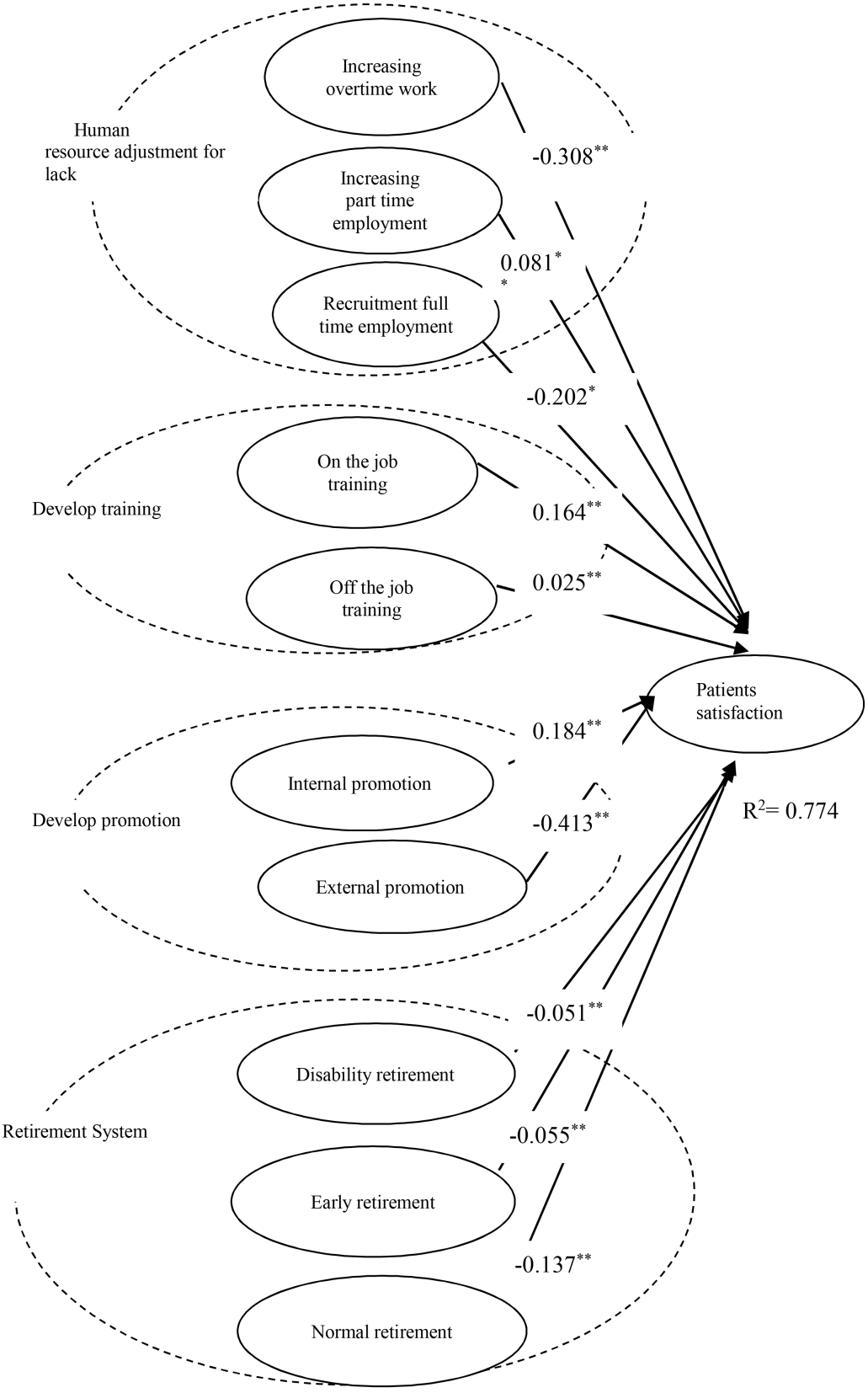
Table 4. Inter construct correlations and discriminant validity.

Constructs	1	2	3	4	5	6	7	8	9	10	11
Increasing overtime work	0.779										
Increasing part time employment	0.754	0.870									
Recruitment full time employment	0.575	0.618	0.846								
On the job training	0.693	0.661	0.556	0.814							
Off the job training	0.702	0.666	0.663	0.773	0.817						
Internal promotion	0.751	0.741	0.640	0.742	0.813	0.822					
External promotion	0.595	0.745	0.610	0.518	0.641	0.624	0.888				
Disability retirement	0.724	0.619	0.567	0.558	0.725	0.812	0.641	0.815			
Early retirement	0.722	0.612	0.561	0.566	0.711	0.803	0.602	0.713	0.811		
Normal retirement	0.712	0.644	0.588	0.512	0.744	0.799	0.608	0.803	0.801	0.805	
Patients' satisfaction average	0.559	0.732	0.516	0.781	0.756	0.818	0.821	0.696	0.800	0.803	0.802

satisfaction. As for the composite model "Table 6", the amount of the explained variance is 0.739, which is similar to the decomposed model. On the other hand, the links between the patients' satisfaction, the human resource adjustment for lack, the training and the promotion development as well as the retirement system returned path weights of 0.259, 0.693, 0.299 and 0.688, respectively.

6. Discussion and Concluding Remarks

Consistent with expectations, the results of the decomposed model showed that increasing overtime work has a significant negative effect on the patients' satisfaction. Hence, H1 is supported. As might be expected, working long hours (exceeding



*ρ ≤ 0.01; **ρ ≤ 0.05; ***ρ≤0.001

Figure 1. Analysis result.

Table 5. Indicator weights and significance levels.

Construct	Weight	t-statistic	Significance
Increasing overtime work	0.357	3.882	$\rho \leq 0.001$
Increasing part time employment	0.470	3.669	$\rho \leq 0.001$
Recruitment full time employment	0.272	3.554	$\rho \leq 0.001$
On the job training	0.577	4.202	$\rho \leq 0.05$
Off the job training	0.120	1.150	$\rho \leq 0.05$
Internal promotion	0.127	3.466	$\rho \leq 0.001$
External promotion	0.577	2.772	$\rho \leq 0.05$
Disability retirement	0.270	2.877	$\rho \leq 0.05$
Early retirement	0.214	2.799	$\rho \leq 0.05$
Normal retirement	0.206	2.205	$\rho \leq 0.001$

Table 6. Summary of results of the model tests.

Relationships	Path	Significance
Decomposed model		
Human resource adjustment for lack		
Increasing overtime work is negatively related to patients' satisfaction	−0.308	$\rho \leq 0.05$
Increasing part time employment is positively related to patients' satisfaction	0.081	$\rho \leq 0.05$
Recruitment full time employment is negatively related to patients' satisfaction	−0.202	$\rho \leq 0.05$
Develop training		
On the job training is positively related to pastients' satisfaction	0.164	$\rho \leq 0.05$
Off the job training is positively related to patients' satisfaction	0.025	$\rho \leq 0.05$
Develop promotion		
Internal promotion is positively related to patients' satisfaction	0.184	$\rho \leq 0.05$
External promotion is positively related to patients' satisfaction	−0.413	$\rho \leq 0.05$
Retirement system		
Disability retirement is negatively related to patients' satisfaction	−0.051	$\rho \leq 0.05$

traditional 8 working hours per day) can take a toll on healthcare providers. In fact, overtime work has been reported to increase the odds of making errors (Gabriel et al., 2018). Moreover working overtime has been reported to be associated with healthcare staff-sensitive outcome, including the work related stress and burnout, the patient's pressure fall, near errors in medication, rescue failures (Liu et al., 2012) which have been associated with a lower patients' satisfaction.

Furthermore, in contradiction to previous research (Joung et al., 2018), the result of the decomposed model empirically revealed a positive significant relationship between the increasing part-time employment and the patients' satis-

faction. Therefore H2 is supported. In fact, these findings are consistent with those of prior research (Wheeler et al., 1990), suggesting that there are additional benefits to having part-time physicians on the staff. One possible explanation of the present result is that, although part-time physicians are less available overall, they may take on a smaller panel of patients and therefore have as much time and energy available for each individual patient. In addition, part-time healthcare providers choose to work fewer clinical hours, they may provide the patient with a better experience, a higher work satisfaction and less burnout than full-time physicians (Mechaber et al., 2008), which may be attributed to an increased sense of control in setting one's schedule (McMurray et al., 2005) feeling less time pressure with patients (Haas et al., 2000) or better work-life balance and therefore higher patients' satisfaction scores.

However, contrary to much of the previous literature (e.g., Panattoni et al., 2015) we found empirical evidence consistent with the argument that recruiting full-time health professionals provides lower patients' satisfaction, hence, H3 is supported. Therefore, longer clinical full-time healthcare staff hours may contribute to job-related stress and exhaustion, which has been associated with lower quality of communication in medical settings (Keller, 2001) and therefore patients' lower satisfaction.

In fact, our results of the composed model also showed a direct and significant correlation between the training development and the patients' satisfaction, in the sense that the patients who received care from trained healthcare providers are significantly more satisfied than those who received care from untrained staff (Al Kurdi et al., 2020). Therefore, sources of low patients' satisfaction are associated with unskilled or inappropriately trained staff. Although the decomposed model showed that the positive impact of "on the job training" is higher than the "off the job training", providing support for H4. One explanation is that stress among hospitalized patients caused by the unfamiliarity with the surrounding, the loss of contact with the family and friends, the feeling of loneliness, the abandonment and fear of the possibility or the presence of a serious illness during the COVID-19 pandemic, can cause significant psychiatric morbidity, which makes training programs designed to alter these feelings crucial (Collins et al., 2020).

Moreover, an on the job training is more efficient in such circumstances because it is perceived to be more real life, contextualised and relevant and concerned primarily with the "how" it is more time pressured, more just in time, improvised, more meaningful and more practical (with paying attention to the psychological treatment). This could be the reason why the patients' satisfaction outcome is better with an on the job training than the off the job training program (Nguyen el al., 2020).

The result of the decomposed model empirically revealed a positive significant relationship between the internal promotion and the patients' satisfaction but a negative significant relationship between the external promotion and the pa-

tients' satisfaction. This study shows that not all the kinds of promotions are direct contributors. Hence H5a is supported, however H5b is rejected.In fact, there are several possible explanations for this results in line with Armstrong's (2006) findings, which justified that the internal promotions encourage the employees to do their best knowing that good performance will be rewarded and certainly they have little motivation if they feel that better jobs are reserved for outsiders (Pearce, 2011).

In addition, in line with Groysberg et al.'s (2008) work, when hired externally (external promotion), high performing individuals from premium organizations reduce the short-term decrease in performance during the new job acclimation period for both the employees and the organization, especially when the high performing employee moves to lower ranked organizations (Lacetera et al., 2004). The result of the decomposed models revealed that for the retirement system, the disability, the early and the normal retirement has a significant negative impact on the patients' satisfaction. Hence, H6 is rejected.

Thereupon, the retirement act often results in a great loss of experience, an increased risk of losing a valuable group of health professionals, skill, knowledge and judgment, which are all beneficial for successful clinical and administrative operations (Beck & Boulton, 2016) and therefore, are linked to a patient's lower satisfaction income.

7. Implication

This study has several practical and theoretical implications. Firstly, this study contributes to the human resource management literature by investigating the value of human resource planning during a crisis time like that of the COVID-19 pandemic. Secondly, we could develop an instrument to measure the human resource planning (HRP) because there are no existing measure items for human resource planning in the published literature. Finally, private hospital managers should be aware of advantages they can gain from the HRP because some HRP's practices might play a critical role in boosting patients' satisfaction with quality of care provided.

8. Limitations and Future Research

A few limitations should be taken into consideration when interpreting the result findings reported in this article. First, this study has examined the association between the human resource planning and the patients' satisfaction in a small sample of Tunisian private clinics (n = 85). In fact, the generalizability of the findings is limited. Therefore, future studies should investigate the phenomenon in a larger sample.

This study was conducted in one type of hospitals (private hospitals) through a convenience sampling procedure. Therefore, other types of hospitals (government hospitals) and random sampling techniques have to be used in future research.

The third limitation is that this study is confined to a population of health care providers (physicians, nurses, and allied health staff), the associations observed between human resource planning and the patients' satisfaction can be generalized to other healthcare personnel but other populations (non-healthcare workers) need to be studied separately.

The fourth limitation is that human resource planning practices of the Japanese management style can be not convenient to be applied in other cultures and contexts, such as the Tunisian healthcare sector. In addition, although this study goes further than other studies in examining the potential link between specific human resource practices and the patients' satisfaction, some important variables remained unmeasured in our study. In particular, future research should examine the potential mediators' effects (such as the mediating role of knowledge management capacity).

Fifth, there may be multiple dimensions of patient satisfaction some of which are yet explored areas of research. We have no doubt that there are constructs that we have not defined and measured. Sixth, this study was conducted at a particular point in time (the second wave of the COVID-19 pandemic), which may not adequately qualify to understand the causal inference. Finally, we have not included any control variable (demographic information such as: age, gender, marital status, nationality and length of stay) in the model.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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