

Nurses' perceptions of COVID-19 as a facilitator or barrier to engagement in job crafting



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Abstract

Purpose – The COVID-19 pandemic outbreak brought a high workload and many changes in nurses' daily work routines. As a result, nurses required job crafting. Although research demonstrates the importance of job crafting during a crisis, there was not much information available on nurses' perceptions to what extent COVID-19 could be a facilitator or barrier to engagement in job crafting. Therefore, the purpose of this study was to explore how nurses perceived the opportunity to add job crafting during times of COVID-19.

Design/methodology/approach – This qualitative study used twelve semi-structured interviews with open-ended questions. Respondents consisted of nurses working in hospitals in the Netherlands.

Findings – The results indicated that COVID-19 can be both a barrier and a facilitator for nurses' involvement in job crafting. One of the biggest barriers was that due to the high workload of COVID-19, there was no time for job crafting. On the other hand, COVID-19 can be a facilitator in various ways. For some nurses, the support and respect from the hospital and supervisors were high. COVID-19 causes nurses to think of solutions to reduce the high workload.

Research limitations – There were a few limitations. There was too little focus on COVID-19 during the initial interviews. In addition, the study results are not generalizable because 12 interviews were conducted. Finally, this study did not look at the issue from different perspectives.

Practical implications – This study contributes to a better understanding of nurses' perceptions of the possibility of job crafting in times of COVID-19. It gives Human Resource (HR) managers insight into how to provide opportunities for nurses to apply job crafting during crises such as COVID-19.

Keywords COVID-19, Job crafting, Increasing social job resources, Increasing structural job resources, Increasing challenging job demands, Decreasing hindering job demands

Paper type Master Thesis

Introduction

On March 11, 2020, the World Health Organization characterized COVID-19 as a pandemic (WHO, 2020). This pandemic can be described as a global public health crisis with an enormous impact on the health system and the whole society (Kniffin et al. 2021). The COVID-19 pandemic had a tremendous impact on the workload of nurses (Hoogendoorn et al., 2021). At the end of January 2021, the number of people diagnosed with COVID-19 crossed the one hundred million marks worldwide (World Health Organization, 2021). People with severe symptoms of the COVID-19 virus end up in a hospital (Akkermans et al., 2020). As a result, healthcare workers work around the clock to provide support services (Akkermans et al., 2020). Intensive Care Unit nurses had to care for more than two patients per nurse at the height of the COVID-19 crisis (Hoogendoorn et al., 2021). Furthermore, the outbreak of COVID-19 caused nurses' daily work routines to change as hospitals adopted more intensive hygiene procedures, family support and care, mobilization and positioning, and respiratory care (Hoogendoorn et al., 2021).

As a result of this increased workload and many changes in nurses' daily work routines due to COVID-19, nurses require self-leadership (Tims & Bakker, 2010). One way for nurses to gain more self-leadership is the use of job crafting (Bakker, 2018). When employees take on more responsibility and make changes in their work environment, this behavioral change is commonly referred to as 'job crafting' (Wrzesniewski & Dutton, 2001). Job crafting can be defined as the behavior aimed at optimizing the fit between a job and a person with their personal preferences and abilities (Bakker, 2018). Nurses should create goals for themselves and mobilize their job resources (Tims & Bakker, 2010). This is necessary because in times of COVID-19 leaders are not commonly available to provide feedback, support, and coaching to employees (Breevaart et al., 2014). Job crafting entails shaping, designing, and redesigning the job's physical task limits, relational task boundaries, and cognitive task boundaries (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001).

There has been extensive research on measuring the extent to which different workers, in various occupations, practice and carry out job crafting. However, little is known about the occupations in which job crafting is difficult to apply (Harbridge et al., 2022). For example, in professions where autonomy is not abundant, such as nursing (Harbridge et al., 2022). Many nurses feel that their autonomy is limited by standard protocols and cannot be broken because of safety issues (Manley, 1995).

It is important to engage in job crafting especially during a crisis such as COVID-19 (Sahay & Dywer, 2021). Job crafting can contribute to helping organizations, teams, and

individuals recover (Doerfel et al., 2010; Kendra & Wachtendorf, 2003). Job crafting has a positive impact on employee job satisfaction, job performance, and well-being (Wrzesniewski & Dutton, 2001). Moreover, the use of job crafting is a key to improving employee motivation, especially in high-stress situations such as the COVID-19 crisis (Munir et al., 2021).

While research demonstrates the importance of job crafting during a crisis, not much is known about how COVID-19 may contribute to nurses' ability to engage in job crafting (Sahay & Dywer, 2021). Because COVID-19 is a recent crisis, there is not much information available on nurses' perceptions to what extent COVID-19 may be a facilitator or barrier to engagement in job crafting. Therefore, the purpose of this study is to examine how nurses perceived the opportunity to add job crafting during times of COVID-19. This led to the following research question: *“How does the COVID-19 crisis facilitate or hinder nurses' engagement in job crafting?”* It is important to gain knowledge about this because currently information is only known about the application of job crafting for nurses in normal situations and not in crisis situations. Nurses' perceptions of COVID-19 as a barrier or facilitator to job crafting skills are examined in terms of the four job crafting dimensions. These dimensions are explained in the theoretical framework. This study explicitly focuses on nurses working in hospitals in the Netherlands.

This study contributes to scientific relevance because there is not yet much literature on job crafting among nurses during the COVID-19 pandemic. It is important to gain knowledge about this because there is a lack of research on this topic, as it is a new and ongoing phenomenon (Almeida et al., 2021). A crisis is seen as a one-time event and process that unfolds before, during, and after the event (Seeger & Mitra, 2019). An important characteristic of a crisis such as COVID-19 is that it often brings both role challenges and opportunities for employees (Berg et al., 2010b; Lewis, 2019). According to the Job Demands-Resources model (JD-R model), job crafting changes either the level of job resources, the level of job demands, or both (Tims et al., 2013). It is important to obtain information about how nurses balance their job resources and job demands during times of crisis (Tims & Bakker, 2010).

In addition, it has social relevance because the results of the research can be used in practice. Because people now live and work in an interdependent world, threats such as the COVID-19 pandemic must be recognized as part of the field of work (Kniffin, 2021). By studying crises and pandemics, more is known about the impact on different professional groups, including nurses (Akkermans et al., 2020). Because nurses were particularly affected by the COVID-19 pandemic, it is important to gain a better understanding of how COVID-19

affects the ability to perform functional acts in healthcare. Additionally, it is important to provide knowledge for hospitals that will allow nurses to perform job crafting in times of crisis.

This study consists of several main sections. After providing this introduction chapter, chapter two is presented. The second chapter provides a review of the relevant literature, which is supported by a theoretical framework. The third chapter explains the choice of methodological approach and the method of implementation. Chapter four presents the research results, followed by the discussion in chapter five. Chapter six describes the practical and managerial implications, a critical reflection on the limitations of the study, and directions for further research.

Theoretical framework

This chapter describes the most important concepts used during the study. First, the concept of job crafting is explained, then the Job Demands-Resources model (JD-R model) is clarified followed by the four dimensions of job crafting. Finally, job crafting during the COVID-19 pandemic is explained and then the barriers and facilitators are explained.

Job crafting

The COVID-19 pandemic outbreak brought a high workload and many changes in nurses' daily work routines (Hoogendoorn et al., 2021). As a result, nurses need self-leadership in which nurses create goals for themselves and mobilize their job resources (Bakker, 2018). This is known as job crafting (Bakker, 2011). Job crafting is necessary because it is not always possible to get feedback, support, and coaching from managers in times of crisis (Breevaart et al., 2014). Job crafting refers to the behavior aimed at optimizing the fit between a job and a person with their personal preferences and abilities (Bakker, 2018). It is becoming increasingly important to understand how nurses can shape, design, and redesign their job characteristics in which they can express their individual needs (Tims et al., 2013). This is important because people, including nurses, are becoming more responsible in their careers (Grant & Parker, 2009).

Research by Wrzesniewski and Dutton (2001) indicates that self-initiated adjustments can be divided into the boundaries of tasks, relational boundaries, and cognitive boundaries. Changing task boundaries refers to changing the type or number of activities one performs while doing the job and one's perspective on the work (Berg et al., 2010b). In addition, changing relational boundaries focuses on practicing discretion about whom to interact with while performing work (Wrzesniewski & Dutton, 2001). Next to that, cognitive crafting is about how people change their thinking about the work tasks they are responsible for (Tims & Bakker, 2010). By doing this, both the meaning of the work and the work identity of people are affected (Wrzesniewski & Dutton, 2001). The meaning of the work stands for the individuals' perceptions about the aim of their work or what they perceive is accomplished in the work (Berg et al., 2010b). Work identity stands for how individuals define themselves during their job (Wrzesniewski & Dutton, 2001).

According to Tims et al. (2012), job crafting is positively related to job satisfaction, job performance, and work engagement. It has been found that even in limited and routine jobs, people may have some influence on what the effect of the work is (Wrzesniewski & Dutton, 2001). Therefore, job crafting is interesting for organizations in the healthcare sector because it

is a skill that can be learned and efficiently transferred to the organizational practice (Wingerden et al., 2016). According to French et al. (2007), healthcare workers have an influence on the quality of healthcare because they are in direct contact with their clients. Therefore they need an adequate number of resources to achieve their work-related goals (French et al., 2007).

Job crafting is operationalized according to the types of job characteristics proposed in the Job Demands-Resources model (JD-R model) (Tims et al., 2013). In alignment with the JD-R model, job crafting change either the level of job resources, the level of job demands, or both (Tims et al., 2013). According to the updated JD-R model, Tims et al. (2013) distinguished between four different job crafting dimensions. The first two dimensions refer to job resources. These are social and structural job resources. Examples of social job resources are feedback and social support (Tims et al., 2013). An example of structural job resources is autonomy. The other two dimensions refer to job demands. These are challenging and hindering job demands. An example of challenging job demands is starting a new project. An example of hindering job demands is reducing heavy workloads (Tims et al., 2013). The explanation of the JD-R model in the next section is followed by an explanation of the four dimensions of job crafting. The theoretical framework of the JD-R model and the four dimensions of Tims et al. (2013), were adhered to during the study.

Job Demands-Resources model

Job crafting can be defined as the changes employees can make to balance their job resources and job demands in conjunction with the employees' abilities and needs (Tims & Bakker, 2010). The JD-R model contributes to how healthcare professionals and supervisors can optimize the working environment. This indirectly increases the well-being and job performance of healthcare organizations (Bakker & Demerouti, 2007). The JD-R model suggests that any organization can be categorized based on two job characteristics, namely job resources and job demands (Tims et al., 2012).

Job resources are characterized as the components of a job that have motivational potential, which help to achieve organizational goals (Bakker, 2011). This can lead to a positive work environment and job satisfaction in which job requirements are met (Bakker, 2011). According to Deci and Ryan (2000), job resources influence people's personal development. People learn and develop themselves through job resources (Deci & Ryan, 2000). Examples of job resources are social job resources and structural job resources (Bakker, 2018).

On the other hand, job demands are characterized as the aspects of a job that require psychological and, or physical effort for the long term (Bakker & Demerouti, 2007). Examples are complex work tasks and heavy workloads (Bakker & Demerouti, 2007). These may be described as challenging job demands (Crawford et al., 2010). While job demands are not always negative, job demands can turn into work stressors. This can happen when too much effort is required to meet the job demands (Meijman et al., 1998). According to Spector and Jex (1998), employees experience personal pressure because they feel they do not have enough time to complete all essential tasks. In addition to challenging job demands, there are hindering job demands, such as role ambiguity, bureaucracy, and emotionally demanding interactions with others (LePine et al., 2005). The four diverse types of job dimensions are explained in the next section.

Increasing social job resources

According to the JD-R model of Tims et al. (2013), employees can shape their work environment more according to their value through the application of increasing social job resources. Increasing social job resources affects the social aspects of a job (Tims et al., 2012). Examples are supervisory coaching, social support, and feedback (Petrou et al., 2012). Increased social job resources have a positive impact on the social components of a work and achieving appropriate levels of engagement (Tims et al., 2012). Job satisfaction and work motivation are enhanced when social job resources increase (Tims et al., 2013).

Research by Blanco-Donoso et al. (2021), indicates that social support during a crisis such as COVID-19 is essential for reducing secondary stress. Employees who experience a higher workload combined with more support from their colleagues and supervisors experience less stress (Blanco-Donoso et al., 2021). Therefore, it is important to provide employees with resources, recognition, and support so that they can better cope with demanding situations (McCabe et al., 2017). Multiple studies indicate that nurses have an interest in social support during virus epidemics (Brooks et al., 2018; Kisely et al., 2020).

Increasing structural job resources

Increasing structural job resources, according to the JD-R model are resources that have an impact on the job design for the employee responsibility (Tims & Bakker, 2010). Examples include the autonomy they have, and the knowledge of the job that allows employees to develop

themselves (Tims et al., 2012). A more structural workforce allows workers to develop innovative thoughts (Ren et al., 2020).

Structural job resources lead to an increase in employee well-being and job satisfaction, which reduces the risk of burnout (Tims et al., 2013). For this reason, it is important to offer employees freedom and autonomy in their work (Widyani & Radiku, 2021). In addition, when employees can live up to their responsibilities, they can respond quickly to traumatic events such as the COVID-19 pandemic (Yuan et al., 2021).

Increasing challenging job demands

According to the study by Van den Broeck et al. (2010), challenging job demands can be distinguished in the JD-R model. Challenging job demands can be seen as problems or limitations that limit a person's ability to act (Berg et al., 2010a). Research by Pulakos et al. (2000) indicates that workers must find ways to overcome the limits and obstacles they face. This requires effort from workers to adapt (Pulakos et al., 2000). Additionally, employees may experience more challenges when they feel that their job does not provide them with enough opportunities to use all their skills (Tims & Bakker, 2010).

Even though these challenging demands cause extra effort, employees respond positively to them (Tims et al., 2012). Moreover, according to a study by Crawford et al. (2010), challenging job demands are positively related to job engagement. When employees create more challenges for themselves at work, personal growth and job satisfaction can increase dramatically (Berg et al. 2010a). For example, employees creatively solve problems to bring complex issues to a successful conclusion or develop innovative solutions (Pulakos et al., 2000).

One barrier that emerges from Berg et al.'s (2010b) research is that when employees can control how they use their time and energy, they may face constant challenges. There is a constant struggle between employees' expectations of how to manage their time and, conversely, how they would prefer to spend their time (Berg et al., 2010b).

The outbreak of the COVID-19 pandemic dramatically changed work structures and work methods. As a result, work becomes more challenging (Irfan & Qadeer, 2020). Research by Irfan and Qadeer (2020) found that employees have a higher level of workload and job autonomy as a result. These resourceful and challenging conditions create an active work environment in which employees experience freedom of work (Irfan & Qadeer, 2020). In addition, employees experience the opportunity to develop and learn new things. This can be motivating and has a positive impact on the implementation of job crafting behaviors (Irfan & Qadeer, 2020).

Decreasing hindering job demands

According to the JD-R model by Tims et al. (2012), decreasing hindering job demands is independent of the other three dimensions. Decreasing hindering job demands means that employees proactively reduce their job demands now they identify that their job demands have become overwhelming (Tims et al., 2012). Research by LePine et al. (2005), demonstrates that hindering job demands can be perceived as stressful because they may unnecessarily impede personal growth and optimal functioning. Research by Crawford et al. (2010) indicates that a negative relationship can be seen between the hindering job demands and work engagement. When there is long-term exposure to high demands combined with low levels of labor resources, this can have negative effects on people's health (Bakker et al., 2005). Additionally, it can lead to negative organizational outcomes such as staff turnover (Kulik et al., 1987).

Individuals are assumed to make creative and skillful use of limited work resources (Wrzesniewski & Dutton, 2001). COVID-19 can lead to anxiety and stress if it leads to an increase in job demands. Examples include time pressure, and emotional and cognitive demands (Wang et al., 2020). Chronic fatigue among nurses during times of COVID-19 indicates low job satisfaction among nurses (Lavoie-Tremblay, 2022). When there is low job satisfaction and chronic fatigue, the intention to leave increases (Lavoie-Tremblay, 2022). This can be a huge barrier to overcoming the COVID-19 situation (Kim et al., 2020).

Job crafting during COVID-19

According to Irfan and Qadeer (2020), it seems that the outbreak of the COVID-19 pandemic changed work practices and work structures. Pandemics such as COVID-19 may render some roles meaningless or change the meaning of existing roles (Sahay and Dwyer, 2021). According to the JD-R model, high job demands appear to deplete energy, leading to employee attrition (Munir et al., 2021).

When workloads increase, adherence to job crafting strategies for work situations is useful for employees who face changes in work processes (Ingusci et al., 2021). Research by Munir et al. (2021) indicates that nurses use job crafting strategies to stay motivated at work. The use of job crafting is a key to improving employee motivation, especially in high-stress situations such as the COVID-19 pandemic (Munir et al., 2021). Job crafting can contribute to the recovery of organizations, teams, and individuals (Doerfel et al., 2010; Kendra & Wachtendorf, 2003). From the perspective of the JD-R model, job crafting has a direct impact on reducing health, namely behavioral stress (Ingusci et al., 2021). As a result, COVID-19 is used by employees as an approach to increasing resources (Ingusci et al., 2021).

In addition, the rigorous changes make work more challenging during COVID-19 (Irfan & Qadeer, 2020). According to Sahay & Dwyer (2021), the COVID-19 situation requires flexibility from employers and employees. In this way, they can proactively change tasks and roles as needed (Sahay & Dwyer, 2021). Research by Irfan and Qadeer (2020) indicates that job demands are perceived as challenging during times of the COVID-19 pandemic. During the COVID-19 outbreak, nurses faced dilemmas in prioritizing activities (Forthun et al., 2021). This was due to a shortage of staff and other medical resources (Forthun et al., 2021). Another cause is that nurses can be transferred to another department where their specialization is not. In this way, the workload is increased (Forthun et al., 2021). Additionally, these job demands can increase learning opportunities (Leach et al., 2013). For example, by applying job crafting in crises, such as COVID-19, employees experience a higher degree of autonomy in their work (Leach et al., 2013). In addition, according to the JD-R model, nurses experience a high degree of autonomy on days when there is high work engagement (Bakker & Bal, 2010).

COVID-19 as a barrier and facilitator

During the study, it was investigated how COVID-19 can function as a facilitator and or barrier to performing job crafting according to nurses. According to Berg et al. (2010a), barriers are defined as the objects that limit people's ability to exhibit behaviors or think and on the other hand. Examples of barriers are high workload, insufficient staff, and limitations in a role (Harbridge et al., 2022). On the other hand, facilitators are the objects that help make that behavior or thought possible (Berg et al., 2010a). Examples of facilitators for job crafting are the availability of opportunities, experience, and level of skills, support from management (Harbridge et al., 2022).

Methodology

This chapter explains the methods and sample for this study. The sources needed to obtain the data are explained. A research approach is presented and the ethical aspects are discussed.

Research design

To answer the research question “*How does the COVID-19 crisis facilitate or hinder nurses' engagement in job crafting?*” qualitative research was used. Qualitative research allows for the observation and understanding of the respondent's perspective on the phenomenon (Myers, 2009). Qualitative research methods are useful for describing complicated complex phenomena in-depth (Sofaer, 1999). Moreover, according to Sofaer (1999), qualitative research methods are valuable in detecting unique or unexpected events, and this provides elucidation of the experience and interpretation of events by actors whose opinions are rarely heard.

In addition, an abductive approach is used in this study. This approach can be seen as a combination of an inductive and deductive approach (Dubois & Gadde, 2002). In an abductive approach, the goal of the researcher is to discover new findings, such as other variables and relationships (Dubois & Gadde, 2002). Because of the unexpected empirical findings and theoretical insights obtained during the process, the original template changed over time (Dubois & Gadde, 2002). The abductive research approach is the best fit for the study because the research focuses both on existing theories and on exploring new knowledge. This approach was used because not much is known about nurses' engagement in job crafting in times of COVID-19. In addition, not much is known about COVID-19 as a barrier or facilitator to the implementation of job crafting. It is important to focus on theory and interview data.

Data collection

Research by Bleijenbergh (2015) indicates that there are several strategies to employ for qualitative research. For this study, semi-structured interviews with open-ended questions were used. By asking people open-ended questions during an interview, the researcher extracts more detailed information from the respondents (Bleijenbergh, 2015). This provides information on how they formulate their own experiences (Bleijenbergh, 2015). An interview with open-ended questions offers more opportunities to collect data on unexpected topics and events. This provides richer and more varied information (Bleijenbergh, 2015).

Semi-structured interviews were used to administer the questions, as this approach allows the questions to be thought of in advance (Bleijenbergh, 2015). According to Symon and

Cassell (2012) in semi-structured interviews, the wording of the questions is determined before an interview and the order of the questions is determined. In addition, it can be changed during the interview (Symon & Cassell, 2012). The semi-structured questions ensured that all respondents were asked the same questions and in this way, the reliability of the data collection was increased (Bleijenbergh, 2015). Because the interview was pre-structured, a disadvantage could have been that the interview is directed in a certain direction. Therefore, it was important to listen carefully during the interview and not to interrupt the respondent in his or her story. If the respondent had additions, they could be made (Symon & Cassell, 2012).

To pursue the highest possible validity, several details were important. Validity consists of internal validity and external validity (Borsboom et al., 2004). Internal validity is the degree to which an established cause-and-effect relationship cannot be explained by other factors. As a result, what was previously intended to be measured is measured (Bleijenbergh, 2015). To achieve the highest possible level of validity, an interview protocol was established. The English interview format can be found in Appendix 1 and the Dutch interview format in Appendix 2. The responses to the interview questions help answer the research question for this study. The purpose of this study was to gain insight into nurses' perceptions of the ability to apply job crafting during times of COVID-19. Therefore, questions were added to the interview protocol regarding the impact COVID-19 has on the four different dimensions. The interview protocol was originally English. The interview protocol was first translated individually by the students in the thesis circle and then the best translation was chosen together to use as the interview protocol. External validity refers to the criterion that findings should be generalizable to a larger population (Bleijenbergh, 2015). To achieve this, a minimum of twelve nurses, spread across different hospitals in the Netherlands, were used.

Sample

Interviews were conducted from late March to late April, with a minimum of ten nurses working in hospitals in the Netherlands. The interviews lasted approximately 40 to 45 minutes. A total of twelve interviews were used for the study, as two interviews were exchanged between students. The interviews were conducted and transcribed in Dutch. Quotes from the interviews that were used are presented in English in the results chapter.

Nurses are incredibly busy during COVID-19. Therefore, nurses were contacted well in advance to arrange a time and date for the interview. In addition, more respondents were sought than the minimum of ten. This was done because if someone could no longer contribute to the study there would still be enough respondents. Some interviews were conducted on-site but

most interviews were conducted via Zoom or by telephone. Table 1 lists the respondents and the departments in which they work.

Respondent	Nurse department
1	Hematology
2	Trauma geriatrics
3	Surgery
4	Lung/pulmonary
5	Geriatrics
6	Lung/pulmonary
7	Cardiology
8	Intensive care and Recovery room
9	Surgery
10	Surgery
11	Medium Care Pediatrics
12	Intensive care and Emergency care

Table 1. Information respondents

Method of analysis

Because an abductive approach was used, the core concepts were operationalized. These concepts can provide direction during the research process (Corbin & Strauss, 2008; Boeije, 2005). During this research, the theories of the theoretical framework were used as core concepts. Job crafting with the four dimensions was used as a core concept. Moreover, COVID-19 was used as a core concept and appears in the interview questions.

Template analysis was used to analyze the data. Template analysis is a style of analysis that uses thematic analysis and provides structure to the analysis process (King, 2012). There was ongoing flexibility to adjust during the analysis. According to King (2012), a coding template is developed from a set of data that is continually reviewed and modified. King (2012) indicated that template analysis applies an analysis style that falls between top-down and bottom-up.

When coding the interviews, the coding approach of template analysis was used. First, an initial template was created from the literature with codes that could be formatted from the theoretical framework. Next, all significant quotes from the interviews were coded using preliminary codes and the codes from the initial template. This initial template can be found in Appendix 3. In the coding scheme facilitators and barriers were used as general codes of a high order. This was about whether the quote was a facilitator or barrier to the implementation of job crafting in times of COVID-19. In addition, a distinction was made between the four dimensions of job crafting to provide a clear overview. Finally, a final code was associated with each quote using the preliminary code and the codes from the initial template. To make it clear

which codes have been added to the final template, the new codes are highlighted in blue. This final template can be found in Appendix 4.

After the interviews were transcribed and coded, the analysis took place. The analyses are included as results in the results chapter. In the results chapter, COVID-19 is described first as a barrier and then as a facilitator for the implementation of job crafting.

Research ethics

Most interviews were conducted via the online video conference Zoom. An article by Gray et al. (2020) illustrates that there are several advantages and disadvantages to using online tools such as Zoom. One of the biggest advantages of Zoom is that it is accessible to participants. Additionally, participants are in their own comfortable space which makes them feel at ease (Gray et al., 2020). Although the participant and interviewer can see and hear each other via Zoom, they are not in the same room. As a result, the interviewer cannot perceive the participant's body language and emotional cues (Cater, 2011). Therefore, the interviewer listened and observed while conducting interviews through Zoom.

Research ethics were observed by acting professionally as a researcher and using formal language. Because COVID-19 is an intense situation, especially for nurses, there was a possibility that emotions would be rising during the interview. The researcher prepared for this and should this happen during the interview, the researcher would try to remain as calm as possible and try to support the interviewee. This was not necessary during the conduct of the interviews.

An ethical consideration made was that respondents were given a consent form. On this consent form, respondents could sign agreements that were made. The consent form is included in Appendix 5. The participants in the interviews were contacted formally by phone or email, and nothing was done with these phone numbers and email addresses. The information was not and will not be shared with others. A participant could withdraw at any time during the study, this was communicated to the participants. In addition, autonomy was strictly monitored. Permission was sought to make recordings during the interview and nowhere are names or other personal information of the participants mentioned. Only the department where the nurses' work is mentioned if the participant agreed. Upon completion of the interviews, the transcript was shared with the interviewee, and upon completion, the research report will be shared with all interviewees individually. These interviewees will not be put in an email together, they will receive all communication privately from the researcher.

Results

This chapter describes the results that emerged from the interviews. It explains how COVID-19 is seen as both a barrier and a facilitator to the implementation of job crafting by nurses.

COVID-19 as barrier for job crafting

To find out how COVID-19 affects the four dimensions of job crafting, nurses were asked questions about this. A few notable ways in which COVID-19 can be a barrier emerged from the interviews.

What emerged most from the interviews was that due to the workload of the COVID-19 crisis, there was often no time to perform job crafting. This can be seen as a barrier. COVID-19 was always a priority because it was a new and unknown crisis. For example, for the 'increasing social job resources' dimension, there appeared to be no time to receive or give feedback and advice. The nurses worked with many unfamiliar colleagues due to the high workload of COVID-19, which made the barrier to asking for feedback or advice even higher. Respondent 9 said the following about this: *"So all of a sudden we were with super many and also a lot of colleagues you do not know.... And then that actually... That does negate those moments because you do not know each other that well..."*.

Additionally, COVID-19 can be seen as a barrier because if there was an opportunity for feedback, it was usually negative feedback. There was a lot of snarling at each other. Respondent 7 gave the following example: *"Hurry up, that patient has not left yet, you know that kind of thing, then you think god I need that bed, hurry up"*. The interviews revealed that the workload caused a lot of friction between colleagues. There were many sick employees because of COVID-19 and the workload, which sometimes caused tensions to rise. Because everyone worked under high work pressure, these emotions sometimes came out negatively. Respondent 7 gave the following example: *"We really had a lot of patients from 25 to 30, that it was occasionally yes that we did get frustrated with it so that you did not react so um... yes, that you started reacting out of your emotion and not from your head."* Due to the pressure, these conflicts were often not voiced afterward because there was no time for it. Respondent 3 stated the following in this regard: *"Yes, that is because of the past summers and that it was really gigantic pressure... and then you just do not have time to talk things out afterward because you just have to keep going so to speak..."*

Additionally, the interview with respondent 8 revealed that during COVID-19 there was no time for support from the manager in the hospital. There was no help and no asking how the nurses were doing. Moreover, they never came to check on the ward. In this way, the nurses

could not get feedback either, because the supervisors had no idea about the nurses' performance. Additionally, contact with the doctors was minimal because everything was done visually. Respondent 8 had mentioned these two points to the supervisors, but nothing was subsequently done about this. As a result, there was no support from the supervisors and the nurse felt that she was not coached. In this way, COVID-19 can be seen as a barrier.

In addition, COVID-19 can be considered a barrier because COVID-19 patients must remain in isolation. Nurses must therefore wear a suit and cannot leave the isolation. As a result, they have to plan their work very well in advance and cannot make their changes while nursing a COVID-19 patient. This prevented the nurses from making their time arrangements and using their abilities to the fullest. Performing the dimension 'increasing structural job resources' was therefore not possible. Respondent 1 said the following about this: *"So you could, you actually did not have that much um... yes how should I put it very much space to do something at a different time, the moment you went in to that patient room then where a covid patient was lying then you stayed there for half an hour to do anything you could think of, so medication, dressing, washing, making the bed etcetera... um... so it was not so easy to walk in and out."*

In addition, nurses' ability to plan their work was disrupted as they were sent from one department to another due to COVID-19's workload. Respondent 9 stated the following: *"So I often go in with the idea that I will be here for half an hour, for example, and then I actually just do everything and that is sometimes a pity because then you are stuck there and if you then have a call from another patient then that makes.... Yes, it's actually mainly that bit... that... is an obstacle."* Respondent 8 indicated that during COVID-19 she was very dependent on others which prevented her from doing her own thing. For example, respondent 8 had to wait for colleagues from the rotating team to turn a patient. Sometimes they did not come until the end of the day, which prevented her from doing other tasks with the patient. Respondents indicated that they were unable to decide for themselves what to do.

In addition, COVID-19 can be seen as a barrier because in the peaks of COVID-19 nurses did not have time to start new studies. One respondent indicated that the learning environment was not available during the time of COVID-19. Respondent 2 indicated the following in this regard: *"Yeah.... yeah... so then theme days or those scheduled days for the theme groups do not happen, training sessions do not happen, so then you cannot really work on your development."* Respondents indicated that if they were working on the isolation, then they could not just take e-learning because they were not allowed to leave the corona unit. The nurses indicated that they found it difficult that training was not provided because it would give them energy and motivation. Respondent 11 said the following about this: *"Sure we have*

nursed on the stomach in the past, but so many people at once and that you had to turn so much, of course that was also new for us and we had to be trained in that.”

Even though COVID-19 has been mitigated, there is still a high workload in the hospital. The interviews indicated that there is still no time set aside from the hospital for nurses to follow trainings and e-learnings. They have to do this all in their own time, while the work pressure is still very high. Respondent 3 said the following about this: *“No when I come home from work I do not have the energy for that, I really do that on my days off.”* Moreover, the interviews indicated that training is resumed, but because everyone applies at the same time, there is a waiting list.

In addition, because of COVID-19, there was no opportunity to start new projects. Even when things were quiet, the nurses who worked in the COVID-19 department could not develop further. This is because they were isolated and not allowed to leave the department. An example of this barrier to the ‘increasing challenging job demands’ dimension was given by respondent 8: *“Well, at one point, really the last few months, it was a lot quieter so you had time to do things like that, but the downside of that is that you are then on a corona ward and you are not allowed to leave there.”*

Nurses indicated that if they had nothing to do during the period of COVID-19, they had no energy and no desire to take on additional tasks. Respondent 7 said the following about this: *“If there was time then you thought yes bye I’m going to do something else other than sit at work.... so no... that’s really, corona really left a big gaping hole.”* The nurses indicated that they desperately needed moments of peace and quiet during the busy COVID-19 period. *“Yeah if that space was there I actually just made it because we were all just tired and um.... yeah it was just tough, you went through a lot of deaths, a lot of people to the Intensive Care Units so mentally it was also very tough during the high peaks.”*

Due to the COVID-19 situation, nurses indicated that they did receive additional work tasks, but these were not the tasks that energized them and thus are not a feature of job crafting. An example from respondent 1 was the following: *“Now at the moment it is very much a matter of sometimes playing a bit of a policeman on the ward, both for the family and for the patients, how many visitors are allowed, do they have to wear a mask or not.”*

In addition, respondent 12 indicated that in the emergency room at COVID they had nurses from all over the hospital. They had thought it would be helpful if the nurses started teaching the ward nurses how to ventilate. However, they then found out that if the patient had something other than a breathing problem, then all those other nurses from other departments get stuck. Respondent 12 stated the following: *“Which we later thought well that was not so*

smart what we came up with. Yes we had them all focus on one problem and that yes that cost lives.” This is an example where job crafting did not work out well in the COVID-19 situation.

Another way COVID-19 acted as a barrier is that due to COVID-19, nurses could not reduce emotionally, and mental job demands because the workload was too high. Respondent 1 said the following about this ‘decreasing hindering job demands’ dimension: *“Yes... But if I look at the department where I am now, eh.... then corona definitely plays a role. It's both absenteeism from doctors, but also from fellow nurses, actually throughout the hospital.”* The nurses often had to change clothes and then worked in heavy, hot suits. In addition, the nurses indicated that COVID-19 care was demanding because overweight people often ended up in the Intensive Care Unit.

Additionally, few visitors were allowed to visit the corona patients which caused mental exhaustion among the nurses. Nurses saw a patient die without the family being able to be present. Respondent 4 said the following: *“And he's also dying alone and of course that's super sad.... Of course, those are also intense things that you experience as nurses. Because often... You do not want to leave these people alone so they often ask: well, do you want to stay with them but then you think: well.... yeah... you know, that's not my thing either and sometimes that's pretty hard...”* It was so busy that everyone in the Intensive Care Unit had to help, even if people did not want to. This caused the staff to experience intense things that they would not normally experience. Respondent 8 had this to say about this, *“My colleagues in the recovery room, there are quite a few who were quite traumatized by how things were in the ICU.”* Respondent 8 said the following about this, *“And then when you have four in one weekend, also with small children, you know, in the beginning of course those were often young people with small children who were involved, yes that is very intense.”*

Subsequently, many of these nurses dropped out, which led to even more staff shortages and a higher workload. Many nurses suffered from burnout or other mental health issues. In addition, due to COVID-19, there was not much time for interaction with patients. This created emotional job demands. Respondent 3 said the following about this: *“I think that's really bad, because that does get to me when I do not have time for that.... If I just know someone is high, someone slept badly I want to talk about that, but I just do not have time for it.”* Respondent 10 stated the following: *“I think on the one hand I have become a little more reticent ehm.... in asking about someone's social life.... because especially with older people it's actually yes somehow quite confronting.”* Nurses had a sense of responsibility during the COVID-19 pandemic, and that did something to them mentally.

COVID-19 as facilitator for job crafting

In addition to the barriers, the interviews revealed some facilitators that enabled the nurses to implement the job crafting dimensions.

Because it was not possible to provide feedback and coaching at the peak of COVID-19, it appears that more attention is given to this nowadays. Respondent 3 indicated that there is increasingly coaching in giving and receiving feedback. Respondent 3 said the following about this ‘increasing social job resources’ dimension: *“Yeah, we had a coaching session the other day...with communication advisors about the phenomenon of giving feedback and stuff, so we did start working on it.”*

Additionally, several interviews revealed that COVID-19 acted as a facilitator, as the team worked stronger together due to the workload and intense circumstances. As the care load increased, the nurses became more dependent on each other and this caused them to grow closer. Respondent 6 revealed the following: *“Yes, I think so too... ehm I think also the empathy of the team itself, we are a team that does take care of each other, and if you indicate that you do not want it eh then that's totally ok. And then we'll all see how we can solve that and how we can offer you ... a service so that you can still go home, so to speak.”* Normally there are many separate departments that work as separate islands, but this made it a team. Respondent 8 said the following about this: *“What I found really special was the really close cooperation, that is very impressive, you know, the lock buddies who dress you, gynecologists, doctors, rotation teams that were orthopedists, you know... everyone just came to help and you really did it all together, and that was also something I found beautiful about the corona, that was really very special.”*

The intense conditions in the COVID-19 departments, such as the death of patients or ventilation, affected the mental health of the nurses. Conversations were conducted with the nurses about the workload and how they were doing. Several interviews illustrated that the nurses received support from their supervisors. Respondent 6 said the following about this: *“Ehm... I actually think it only worked out in a positive way I think the manager was very supportive of us and monitors very closely how we are doing.”* Another example of support from respondent 6 is as follows: *“Now the previous team head was still there but her husband who was a physiotherapist who also came by twice to give us a massage to eh...”*

Another facilitator of COVID-19 was that the nurses developed new competencies during the busy period. The fact that they had to be efficient with their time due to the high workload gave the nurses the ability to manage their own time. Respondent 1 said the following about this ‘increasing structural job resources’ dimension: *“I think you also have to think very*

efficiently. I think you also have to think very efficiently, in your own way, like, hey, if I'm with that patient anyway, I'll do this, this and this, then I do not have to come back four times.” The nurses indicated that through COVID-19 they have increasingly found their structure in work. Due to the hectic nature of the workload, respondents indicated that they made lists that gave them an overview of their schedule. Respondent 1 said the following: *“More because of that work pressure ehm... I sometimes lost the overview, I thought okay, I have to do this and that, but have I already done it or not? And now I can just tick it off and then I cannot overlook anything anymore.”* The nurses learned to prioritize through the COVID-19 situation. Respondent 4 said the following about this: *“Yeah, definitely, that you think oh that's not that important let it go and there are other things that have a higher priority and then of course you do that first.”*

Additionally, the interviews revealed that because of COVID-19, the hospital implemented stricter rules. If patients came in with elevation, they had to go directly to the COVID-19 unit and were not allowed to leave until the test result was negative. This caused nurses to have to switch gears often. Respondent 9 shared a story in which she was able to act independently because of the COVID-19 rules, *“Yes and sometimes you do that for example because I know, I had a patient on my evening shift last week and I know you are allowed to do a rapid test until 9 o'clock in the evening well then I had done a rapid test at 7:30 and I thought I'm just not going to come back there I'm not going to put him in isolation either and then fortunately it came back negative before 9 o'clock fortunately.”* This can be seen as a facilitator because it allowed the nurses to carry out job crafting.

The nurses indicated that they had to collaborate with many other disciplines and became very flexible as a result. In addition, the nurses indicated working with these other disciplines increased their knowledge. Respondent 6 indicated the following: *“So I think that there ... We also learned a lot during the covid period, looked up things that were already there, asked a lot of doctors, what do you know, what do you see, what can we do with it for the patient. Because we do not know where we stand either, how can we all, together with the doctors, teach each other things in order to be able to provide such a quality, high quality of care even though we do not really know what we're doing.”*

Several respondents indicated that at the beginning of the COVID-19 period, they found it challenging and wanted to learn from COVID-19 because it was unfamiliar and new. The nurses indicated that during the time of COVID-19 they looked up many things and asked for a lot of information from physicians. In this way COVID-19 can be seen as a facilitator. Respondent 6 indicated the following about the ‘increasing challenging job demands’

dimension: *“Because we do not know where we stand either how can we all together with the physicians teach each other things to provide such an um... quality, high quality care even though we do not really know what we're doing.”*

During the time of COVID-19, some nurses took on additional tasks that they found challenging. Respondent 8 indicated that she took on a sort of managerial, coordinating role. It provided variety and she learned new things. Additionally, respondent 8 indicated that because of COVID-19 it was often chaotic in the department and work was left unfinished. She often took the initiative to clean this up and she said the following about this: *“So at one point we sat quietly and I emptied all those shelves, put everything in the right order and labeled it, because I thought, yes, this really cannot be done.”*

On the other hand, despite the high workload, the nurses did everything they could to reduce this workload. Respondent 4 gave the following example about the ‘decreasing hindering job demands’ dimension: *“Yes, what we did was close beds, so that you um.... had to put in fewer colleagues on one day, so we had enough nurses for the next day.”* In addition, another facilitator for this dimension is that the nurses were able to prioritize. Respondent 8 said the following about this: *“For example eh linen we change every three days and then that became every five days ehm.... yes what I say eh.... certain wounds that plasters are replaced we just left that in place, things like that you just adjusted your work to that because in terms of time you just did not have that.”*

Moreover, another facilitator of this dimension is that the COVID-19 situation allowed the nurses to state their boundaries and dared to do so. Respondent 6 said the following about this: *“I'm at a point now where I approach a colleague and say hey do you want to help me get my head in order or do you want to take over because I cannot handle it.”* Respondent 5 commented as follows: *“Yes, I do think that because it has been so hectic and busy during corona, there are colleagues who now tend to say, up to here and no further.... And maybe that's not always a negative thing, because it also means they are taking a closer look at how the workload is, you know?”*

Discussion

This chapter discusses the results based on the literature and interviews. In addition, contributions to knowledge are given. Practical implications are provided. Next to that, limitations and future research directions are described. Finally a small conclusion is given.

Interpretations

This study was conducted because not much was known about how COVID-19 may contribute to nurses' ability to engage in job crafting during times of this pandemic (Sahay & Dywer, 2021). Not much information was available on nurses' perceptions to what extent COVID-19 may be a facilitator or barrier to the implementation of job crafting. This led to the following research question, *“How does the COVID-19 crisis facilitate or hinder nurses' involvement in job crafting?”*

The literature indicated that when workload increase, adherence to job crafting strategies for work situations is useful for employees who face changes in work processes (Ingusci et al., 2021). However, interviews revealed that job crafting was not always possible during COVID-19. The interviews revealed that there was no time for social support, such as feedback, coaching, and interaction. This is contrary to the literature indicating that social support during a crisis is essential for reducing secondary stress (Blanco-Donoso et al., 2021). On the contrary, it appeared from the interviews that there were even cases of negative feedback and interactions as a result of everyone working under a high workload.

The workload caused by COVID-19 prevented structural job resources from increasing. Nurses were unable to schedule their work because they had to work in isolation and constantly dress and undress. This is a barrier because the literature indicated that when employees can take responsibility, they can respond quickly to traumatic events (Yuan et al., 2021). Another point from the interviews was that there was no time for training and e-learning. This prevented nurses from developing their knowledge. While the literature illustrated that structural job resources cause employees to develop innovations in times of crisis (Ren et al., 2020).

Research by Irfan and Qadeer (2020) found that the outbreak of the COVID-19 pandemic caused drastic changes in work structures. This made the work more challenging. This is consistent with the results from the interviews that indicated that COVID-19 required nurses to work in a different way which created challenges. According to research by Tims and Bakker (2010), increasing challenging job demands cause employees to create higher job demands at work. This was reflected in the interviews as well, which illustrated that nurses, for

example, started to take on extra tasks or took on different roles due to busyness. However, this cannot be seen as job crafting because the nurses did not choose this themselves. It was more or less expected of them due to the high work pressure. In this way, the workload increased even more and there was no time left for the nurses to start new projects or take initiatives. When nurses had breaks, they preferred to spend them on a moment of rest. Research by Berg et al. (2010b) revealed that there is an ongoing struggle between employees' expectations of how to manage their time and, conversely, how they would prefer to spend their time. This was evident in the interviews which revealed that employees sometimes did not know how to manage their time.

The literature illustrated that employees proactively reduce their job demands the moment they determine that their job demands have become overwhelming (Tims et al., 2012). However, the interviews revealed that this was often not possible due to the high workload during COVID-19. The literature illustrated that a combination of prolonged exposure to high demands and a low level of the workforce leads to negative organizational outcomes such as staff turnover (Kulik et al., 1987). This is consistent with the interviews, which illustrated that the high workload and intense conditions caused many nurses, doctors, and other hospital employees to drop out.

On the other hand, COVID-19 can be seen as a facilitator. Multiple studies indicate that nurses have an interest in social support during virus epidemics (Brooks et al., 2018; Kisely et al., 2020). Indeed, some interviewees indicated that they had conversations with their supervisor about mental states precisely during COVID-19 and received support. In addition, it appeared that the team they worked in had become stronger as a result of working together during COVID-19.

Moreover, there were a few examples where COVID-19 increased structural job resources that were consistent with the literature. Namely, the COVID-19 situation required nurses to prioritize and schedule their days well to ensure that everything was running as efficiently as possible. Rather, they learned to prioritize according to their schedule and they learned to be flexible. The nurses learned a lot from the COVID-19 situation through collaboration with other departments and curiosity about COVID-19.

The literature revealed that by reducing hindering job demands, individuals make creative and skillful use of limited job resources (Wrzesniewski & Dutton, 2001). This is consistent with the interviews with the supervisor which revealed that the nurses began to reduce workload by closing beds and prioritizing. The interviews illustrated that the nurses were able to set boundaries.

Some of the facilitating factors that emerged from the interviews were surprising because they had not been outlined in advance in the literature. Namely, through COVID-19 the nurses learned to be flexible and manage their schedules. In addition, it was surprising that the nurses indicated that they wanted to learn new things about this precisely because of COVID-19. On the other hand, not all barriers that emerged from the interviews emerged from the literature. Several barriers were mentioned in the literature, such as increasing challenging job demands and decreasing hindering job demands, but not from the other two dimensions of job crafting. This study expanded the list of barriers that affect nurses' engagement in job crafting during COVID-19. One of the biggest barriers is the workload associated with COVID-19, which prevents nurses from implementing some dimensions of job crafting.

To answer the research question, it can be concluded from both the literature and the interviews that COVID-19 was both a barrier and a facilitator to nurses' involvement in job crafting. The biggest barrier was that performing job crafting was not possible due to an excessive workload. For example, this workload meant there was no time for social support. In addition, COVID-19 did not allow nurses to schedule their work and there was no opportunity for development. Due to the time pressure, it was not possible to set up new projects. COVID-19 may be a limiting factor in reducing hindering job demands because the excessive workload prevented this. Both the literature and interviews illustrated that this caused negative psychological symptoms that ultimately led to staff turnover.

In contrast to the barriers, COVID-19 can be seen as a facilitator in some cases. Nurses reported that during COVID-19 they received social support and collaborative teams were formed. On the other hand, a facilitator was that through COVID-19 nurses learned to prioritize, be flexible, manage their schedules, and learn new things about COVID-19. Moreover, COVID-19 can be described as facilitative because of its ability to reduce burdensome job demands by setting boundaries and leaving less important work.

Practical and managerial implications

This study contributes to a better understanding of nurses' perceptions of the possibility of job crafting during times of COVID-19. Several implications were drawn from this study that can be used in practice.

The study found that due to a high workload, there was often no time to implement job crafting. Human Resource (HR) managers could do several things to solve this problem in the future. HR-managers should visit the workplace more often and provide support so that nurses feel supported and more motivated. HR-managers should be open to nurses when they indicate

they experience excessive workloads. It should be taken seriously and solutions sought to prevent nurses from dropping out. It is important that, despite the high workload, nurses are given time to develop. At the time of COVID-19, nurses indicated that they saw an urgency to learn new things.

One of the facilitating factors that emerged from the study was that close-knit teams had been created precisely because of COVID-19. HR-managers need to continue this and organize team activities. In addition, COVID-19 gave nurses the space to organize their time. This is a good point for HR-managers to continue in the future. This is important because nurses feel that their autonomy is limited by standard protocols and cannot be broken because of safety issues (Manley, 1995).

Limitations

The first limitation of this study was that a standard interview protocol was used. With this standard interview protocol, four questions were added about COVID-19. During the initial interviews, the focus was too much on asking all the questions within the agreed-upon time. The focus was not enough on COVID-19. As a result, there is a lot of information but that was not enough relevant to answer the research question. To solve this problem, the interviewees were called and emailed with additional questions about COVID-19. In the sequel, the focus should be more on the COVID-19 questions and more time should be taken to elaborate on this.

A second limitation is that there were only twelve respondents for this study. This is a small sample size because many nurses in the Netherlands face COVID-19. Therefore, the results of the study are not generalizable. Future quantitative research must be conducted to generalize the results. A third limitation is that the results cannot be generalized because the study was conducted among nurses working in different hospitals. As a result, different results of barriers and facilitators emerged, which could not be compared. In the sequel, a sample could be chosen that is more contrasting.

A fourth limitation is that this study did not look at the issue from different perspectives. For example, it did not look from the side of HR-managers, supervisors, and physicians, even though the behavior of these individuals was mentioned during the interviews. To expand the study to include different perspectives, different viewpoints could be considered.

Conclusion

The following research question was investigated during this study: *“How does the COVID-19 crisis facilitate or hinder nurses' involvement in job crafting?”* It can be concluded that COVID-19 can be both a barrier and a facilitator for nurses' involvement in job crafting.

COVID-19 can be a barrier in several ways. One of the biggest barriers was that due to the high workload of COVID-19, there was no time for job crafting. There was no time for feedback, coaching, and advice. If feedback was given, it was negative because people were experiencing a lot of stress due to the high workload. Support from hospitals and supervisors was not available for every nurse. Another way that COVID-19 was a barrier was that nurses could not put their spin on their work due to the workload and strict isolation rules. COVID-19's workload prevented the opportunity for personal development, as there was no time for training, courses, and e-learning. COVID-19 was hindering because new projects were not started because of the workload. Due to the workload, nurses did not have time to take on new or additional work tasks. The tasks they were given extra did not energize the nurses and thus this cannot be seen as job crafting because it is not voluntary. In addition, COVID-19 acted as a barrier because there was no way to reduce the emotional and mental job demands due to the high workload. The work around COVID-19 was intense and created mental problems, causing nurses to drop out and further increasing the workload.

On the other hand, COVID-19 can be a facilitator in various ways. Now that things have calmed down a bit in the COVID-19 period, feedback is slowly being picked up. For some nurses, the support and respect from the hospital and supervisors were high. COVID-19 contributed as a facilitator that the nurses started working in closer-knit teams and that there was more collaboration. COVID-19 functions as a facilitator because of the busy and complicated time, nurses have learned new things. They learned how to manage their time as efficiently as possible, how to prioritize work, and how to be flexible. Additionally, the nurses took on additional tasks for example, a coordinating role to lead everything. COVID-19 causes nurses to think of solutions to reduce the high workload. Moreover, the longer COVID-19 lasted, the nurses were better able to indicate their limits.

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Appendix 1 Interview protocol English

Thank you for agreeing to participate in this study. In the following 30 minutes or so I will ask you a set of questions that revolve around your tasks at work and the way you perform them.

1. Can you please describe for me the nature of your job? (outpatient/inpatient nurse)
2. Can you describe to me your daily tasks in terms of:
 - The tasks that you do that involve interacting with other individuals (colleagues and patients)
 - The tasks that you conduct alone
3. Sometimes we like to add our own “touch” to our jobs and the way we conduct the tasks that fall under it. Can you tell me how do you think you do your job differently from others in comparable jobs ?
4. Have you ever heard about the concept of job crafting? [even if the participant has heard of the concept of job crafting before, please provide him or her with the definition below]

Job crafting includes the set of changes that employees engage in at work in order to achieve a better match between their needs and preferences and their jobs. Employees who engage in job crafting shape their job demands and resources in order to create a work environment that enables them to perform better in.

JC can be divided into the four dimensions outlined in the table below:

Increasing Social Job Resources
<i>I ask my supervisor to coach me</i>
<i>I ask whether my supervisor is satisfied with my work</i>
Increasing Structural Job Resources
<i>I try to develop my capabilities</i>
<i>I try to learn new things at work</i>
Decreasing Hindering Job Demands
<i>I manage my work so that I try to minimize contact with people whose problems affect me emotionally</i>
<i>I make sure that my work is mentally less intense</i>
Increasing Challenging Job Demands
<i>When an interesting project comes along, I offer myself proactively as project co-worker</i>
<i>When there is not much to do at work, I see it as a chance to start new projects</i>

5. I am now going to go through each of the dimensions that I mentioned and ask you specific questions about them:

Increasing Social Job Resources

- Can you please elaborate on the possibility of engaging in this dimension in your job context?
- What do you think are the facilitators of increasing your social job resources in your job context?
- What do you think are the barriers to increasing your social job resources in your job context?
- What impact do you think COVID-19 has had on increasing your social job resources in your job context?

Increasing Structural Job Resources

- Can you please elaborate on the possibility of engaging in this dimension in your job context?
- What do you think are the facilitators of increasing your structural job resources in your job context?
- What do you think are the barriers to increasing your structural job resources in your job context?
- What impact do you think COVID-19 has had on increasing your structural job resources in your job context?

Increasing Challenging Job Demands

- Can you please elaborate on the possibility of engaging in this dimension in your job context?
- What do you think are the facilitators of increasing your challenging job demands in your job context?
- What do you think are the barriers to increasing your challenging job demands in your job context?
- What impact do you think COVID-19 has had on increasing your challenging job demands in your job context?

Decreasing Hindering Job Demands

- Can you please elaborate on the possibility of engaging in this dimension in your job context?
- What do you think are the facilitators of decreasing your hindering job demands in your job context?
- What do you think are the barriers to decreasing your hindering job demands in your job context?
- What impact do you think COVID-19 has had on decreasing your hindering job demands in your job context?

6. Can you please provide me with some job crafting examples that you have initiated in your job or you have witnessed someone initiate in their job and that you thought were effective/ successful?

You yourself:

- What did you do?
- What was the reason behind this JC behavior?
- How did this JC behavior make you feel?
- What was the outcome of this JC behavior?

Another person:

- What did they do?
- What was the reason behind this JC behavior?
- How did this JC behavior make them feel?
- What was the outcome of this JC behavior?

7. Can you please provide me with some job crafting examples that you have initiated in your job or you have witnessed someone initiate in their job and that you thought were ineffective/ unsuccessful?

You yourself:

- What did you do?
- What was the reason behind this JC behavior?
- How did this JC behavior make you feel?
- What was the outcome of this JC behavior?

Another person:

- What did they do?
- What was the reason behind this JC behavior?
- How did this JC behavior make them feel?
- What was the outcome of this JC behavior?

Appendix 2 Interview protocol Dutch

Bedankt dat u deel wil nemen aan dit onderzoek. In de volgende 30 tot 45 minuten ga ik u een aantal vragen stellen wat betreft uw taken die u heeft op uw werk en de manier waarop u ze uitvoert.

1. Kunt u de aard van uw werk beschrijven? (klinische verpleegkundige/poliklinische verpleegkundige)
2. Kunt u uw dagelijkse taken beschrijven in termen van:
 - De taken die u uitvoert waarbij u interactie hebt / in contact komt met andere personen (zoals collega's en patiënten)?
 - De taken die u alleen/zelfstandig uitvoert?
3. Soms willen we onze eigen 'touch' / 'draai' aan ons werk geven en de manier waarop we de taken uitvoeren die daaronder vallen. Kunt u vertellen hoe u denkt dat u uw werk anders doet/uitvoert dan anderen in vergelijkbare functies
4. Heeft u ooit eens gehoord van het concept job crafting?
[Job crafting (JC) omvat een reeks van veranderingen die werknemers op het werk doorvoeren om een betere match te bereiken tussen hun behoeften en voorkeuren en hun baan. Werknemers die aan job crafting doen, geven vorm aan hun functievereisten- en middelen een werkomgeving te creëren waarin ze beter kunnen presteren.

Job crafting kan verdeeld worden in vier verschillende dimensies, uitgelegd in de tabel hieronder.

Increasing Social Job Resources
<i>Ik vraag mijn supervisor om mij te coachen</i>
<i>Ik vraag aan mijn supervisor of hij of zij tevreden is met het werk dat ik uitvoer</i>
Increasing Structural Job Resources
<i>Ik probeer mijn capaciteiten te ontwikkelen</i>
<i>Ik probeer nieuwe dingen te leren op werk</i>
Decreasing Hinderling Job Demands
<i>Ik richt mijn werk zo in dat ik zo weinig mogelijk contact heb met mensen wiens problemen mij emotioneel raken</i>
<i>Ik zorg ervoor dat mijn werk mentaal minder intens is</i>
Increasing Challenging Job Demands
<i>Als er een interessant project langskomt, bied ik me proactief aan als projectmedewerker</i>
<i>Als er niet veel te doen is op het werk, zie ik dat als een kans om nieuwe projecten op te starten</i>

5. Ik ga nu elk van de genoemde dimensies bespreken en u daarover specifieke vragen stellen:

Increasing Social Job Resources

- Kunt u ingaan op de mogelijkheid om aan deze dimensie deel te nemen in uw werkomgeving? Dit te omschrijven?
- Wat zijn volgens u de **ondersteunende/bevorderende** factoren in het vergroten van uw sociale job resources in uw werkomgeving?
- Wat zijn volgens u de belemmerende factoren om uw sociale job resources in uw werkomgeving te vergroten?
- Welke impact heeft COVID-19 volgens u gehad op het vergroten van uw sociale job resources in uw werkomgeving?

Increasing Structural Job Resources

- Kunt u ingaan op de mogelijkheid om aan deze dimensie deel te nemen in uw werkomgeving? Dit te omschrijven?
- Wat zijn volgens u de **ondersteunende/bevorderende** factoren in het vergroten van uw structurele job resources in uw werkomgeving?
- Wat zijn volgens u de belemmerende factoren om uw structurele job resources in uw werkomgeving te vergroten?
- Welke impact heeft COVID-19 volgens u gehad op het vergroten van uw structurele job resources in uw werkomgeving?

Increasing Challenging Job Demands

- Kunt u ingaan op de mogelijkheid om aan deze dimensie deel te nemen in uw werkomgeving? Dit te omschrijven?
- Wat zijn volgens u de **ondersteunende/bevorderende** factoren in het vergroten van uw uitdagende job demands in uw werkomgeving?
- Wat zijn volgens u de belemmerende factoren om uw uitdagende job demands in uw werkomgeving te vergroten?
- Welke impact heeft COVID-19 volgens u gehad op het vergroten van uw uitdagende job demands in uw werkomgeving?

Decreasing Hinderering Job Demands

- Kunt u ingaan op de mogelijkheid om aan deze dimensie deel te nemen in uw werkomgeving? Dit te omschrijven?
- Wat zijn volgens u de **ondersteunende/bevorderende** factoren in het verminderen van uw belemmerende job demands in uw werkomgeving?
- Wat zijn volgens u de belemmerende factoren om uw belemmerende job demands in uw werkomgeving te verminderen?
- Welke impact heeft COVID-19 volgens u gehad op het verminderen van uw belemmerende job demands in uw werkomgeving?

6. Kunt u mij een aantal voorbeelden geven van job crafting die u in uw werk hebt toegepast of die u iemand in zijn werk hebt zien toepassen en die volgens u **doeltreffend/succesvol** waren?

Over jezelf:

- Wat heb je gedaan?

- Wat was de reden achter dit JC-gedrag?
- Hoe voelde je je bij dit JC-gedrag?
- Wat was het resultaat van dit JC-gedrag?

Over de ander:

- Wat hebben zij gedaan?
- Wat was de reden achter dit JC-gedrag?
- Hoe voelden ze zich door dit JC-gedrag?
- Wat was het resultaat van dit JC-gedrag?

7. Kunt u mij een aantal voorbeelden geven van job crafting die u in uw werk hebt toegepast of die u iemand in zijn werk hebt zien toepassen en die volgens u **niet doeltreffend/ niet succesvol** waren?

Over jezelf:

- Wat heb je gedaan?
- Wat was de reden achter dit JC-gedrag?
- Hoe voelde je je bij dit JC-gedrag?
- Wat was het resultaat van dit JC-gedrag?

Over de ander:

- Wat hebben zij gedaan?
- Wat was de reden achter dit JC-gedrag?
- Hoe voelden ze zich door dit JC-gedrag?
- Wat was het resultaat van dit JC-gedrag?

Einde

- Heeft u nog vragen?
- Heeft u nog tips voor mij?

Appendix 3 Initial template

Theme	Sub-theme	Sub-categories
Increasing social job resources in COVID-19 pandemic	Feedback	<ul style="list-style-type: none"> • Feedback • No feedback
	Coaching	<ul style="list-style-type: none"> • Coaching • No coaching
	Interaction	<ul style="list-style-type: none"> • Interaction • No interaction
	Support	<ul style="list-style-type: none"> • Support • No support
Increasing structural job resources in COVID-19 pandemic	Development	<ul style="list-style-type: none"> • Development capabilities • No development capabilities
	Autonomy	<ul style="list-style-type: none"> • Schedule your own time • Use capacities
Increasing challenging job demands in COVID-19 pandemic	Challenges	<ul style="list-style-type: none"> • Complex work tasks • Workload • Use of free time
	Learning	<ul style="list-style-type: none"> • Proactively behaviour • Learn new things • Problem solving
Decreasing hindering job demands in COVID-19 pandemic	Reduce job demands	<ul style="list-style-type: none"> • Reduce emotionally interactions • Reduce workload • Reduce stress
	Impact	<ul style="list-style-type: none"> • Hinder personal growth • Emotional demands • Stress • Burnout • Staff turnover

Appendix 4 Final template

Theme	Sub-theme	Sub-categories
Increasing social job resources in COVID-19 pandemic	Feedback	<ul style="list-style-type: none"> • Feedback • No feedback • Negative feedback • Recovery in feedback
	Coaching	<ul style="list-style-type: none"> • Coaching • No coaching
	Interaction	<ul style="list-style-type: none"> • Interaction • No interaction with colleagues • Negative interaction colleagues • Relationship with patient • Working together in stronger team
	Support	<ul style="list-style-type: none"> • Support from colleagues • Support from supervisor • Support from hospital • No support from supervisor • Respect for nurses
Increasing structural job resources in COVID-19 pandemic	Development	<ul style="list-style-type: none"> • Trainings/e-learnings on hold • No time for trainings/e-learnings • Recovery trainings/e-learnings
	Autonomy	<ul style="list-style-type: none"> • No own twist in time schedule • Own twist in time schedule • Flexibility
Increasing challenging job demands in COVID-19 pandemic	Challenges	<ul style="list-style-type: none"> • Complex work tasks • Prioritize COVID-19 patients • Workload • Use of free time
	Learning	<ul style="list-style-type: none"> • Learn new things • Help colleagues
Decreasing hindering job demands in COVID-19 pandemic	Reduce job demands	<ul style="list-style-type: none"> • Reduce workload • Reduce workload by prioritizing • Reduce stress • Set limits
	Impact	<ul style="list-style-type: none"> • Negative organizational outcomes • Negative mood • Mental health • Emotional consequences • Workload due to employee attrition

Appendix 5 Consent form

INFORMATION AND CONSENT FORM

You are invited to participate in a research project in which we explore nursing work behaviors in hospital settings. This research project is being conducted by Rawan Ghazzawi and Lucia Breedijk, at the Institute for Management Research at Radboud University. The procedure involves being interviewed. The questions concern nursing work behaviors in hospital settings. The interview will take approximately 30-40 minutes. The interview will be audiotaped. Your contact data are not collected.

Confidentiality of the research data

The research data will be made anonymous/ pseudonymized and safely stored according to the research data management guidelines of Radboud University and conform General Data Protection Regulation. The collected data will remain confidential and anonymous and in no way will the answers that you provide be linked to you. As soon as possible, any personal data will be deleted. The researchers involved in this study, will use the research data for academic publications and presentations. The data will not be used for other studies unless we got your explicit permission to do so. For research integrity purposes, the research data will be accessible to the academic community for a period of at least 10 years.

Voluntary participation

Your participation in this research is voluntary. This means that you can withdraw your participation and consent at any time during the data collection period, without giving a reason. Even up to six weeks after participating you can have your research data removed, by sending a request to rawan.ghazzawi@ru.nl.

Compensation

Thank you for participating. You will not receive payment for participation in this study. Your participation helps to improve knowledge about nursing work behaviors in hospital settings.

More information

Should you want more information on this research study, now or in future, please contact: *Rawan Ghazzawi* (email: rawan.ghazzawi@ru.nl ; address: Elinor Ostrom Building, room 03.611) or *Lucia Breedijk* (email: lucia.breedijk@ru.nl ; address: Burgemeester Norbruislaan 322, 3555 EN, Utrecht).

Should you have any complaints regarding this research, please contact the researcher *or*

Contact the confidential Advisors Academic Integrity via email: vertrouwenspersonen@ru.nl

or

Contact the Committee Scientific Integrity of Radboud University. The committee's secretary is

Mr. M. Steenbergen, (m.steenbergen@bjz.ru.nl or 024 3611578) Executive and Legal Affairs.

More information on the Committee Scientific Integrity can be found here:

<https://www.ru.nl/english/research/other-research/academic-integrity/>

CONSENT: Please select your choice below.

Selecting "Agree" below indicates that:

- you have taken note of and you understand this information
- you voluntarily agree to participate
- you are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by selecting "I do not agree".

Do you agree to participate?

I agree

I do not agree

Do you agree to have the interview recorded?

I agree

I do not agree