

How the Covid-19 Pandemic Changed Working in Nursing Homes

A Systematic review on the effects of the Covid-19 pandemic on the Quality of Work

Radboud University



Name: Kars van Oorschot
Student number: s1010289
First examiner: Lander Vermeerbergen
Second examiner: Eline de Jong
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Abstract

The Covid-19 pandemic has presented a great global challenge affecting everyone in their work and personal lives. One of the most affected groups are nursing home workers, facing the pandemic and its consequences from the front-lines. This review aims to explain the consequences the Covid-19 pandemic had on the quality of work of nursing home staff. To establish the quality of work the Job-Demands-Control-Support model is applied. In this narrative systematic review 13 published articles are carefully examined and synthesized to explain the impact of the pandemic on experienced job demands, job control and social support. The result of this review is the conclusion that not the direct consequences of Covid-19, but rather the mitigation measures that have been put in place have a heavy impact on nursing home staff. Overall, job demands have increased due to greater workload and additional tasks. Differences between research can be found towards experiences of job control and social support. Important factors that determine the impact of increased job demands on the quality of work are task information and perceived social support from management.

Keywords: quality of work; Covid-19; nursing homes; job demands; job control; social support

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1. Introduction

In March of 2020 the World Health Organisation declared that Covid-19 has now become a worldwide safety concern and declared the Covid-19 outbreak a pandemic (World Health Organisation, 2020). Over the course of the past two years, various fields of research have examined the effect of Covid-19 on society (Ancillo, Val Núñez & Gavrila, 2020; Kniffin et al., 2021; Reuschke & Felstead, 2020; Khlaif, Salha, Affouneh, Rashed & ElKimishy, 2020; Pamidimukkala & Kermanshachi, 2021). Among this plethora of academic writing, concerns for the well-being of nursing home workers can be detected (Ouslander & Grabowski, 2020; Barnett & Grabowski, 2020; Davidson & Szanton, 2020; Gilissen, J., Pivodic, L., Unroe, K., Van den Block, L., 2020). This research lays a focus on these workers and looks at how the Covid-19 pandemic has affected the quality of work they experience. To answer this question, this research will examine the academic writing concerning the changes in working conditions. This research will perform a narrative systematic review combining these papers to answer the question:

“What was the influence of the Covid-19 pandemic on the quality of work of nursing home workers?”

To establish a clear definition of ‘quality of work’ this research makes use of the Job-Demands-Control-Support model as first stated by Robert Karasek (1979) and later expanded and specified by other academics (Johnson & Hall, 1988; Karasek and Theorell, 1990, Van Hootegem, Huys & Maes, 2014).

At the base of this model lie three key aspects of the nature of quality of work (Karasek, 1979). The first being ‘job demands’. Job demands were first defined by Karasek (1979) as factors that conflict with the instigators of action motivating the worker. ‘Job control’, being first defined as the job decision latitude, is the individual's level of control in their work (Karasek, 1979). Lastly, a later developed concept is ‘social support’. Social support can function as a mediating factor between the negative strain caused by job demands and the buffering effects of job control (Van Yperen & Hagedoorn, 2003).

In previous research concerning nursing homes, several consequences of low quality of work have become apparent. This includes mental strain, work motivation, burn-outs, reduced

personal accomplishments and emotional exhaustion (De Rooij et al, 2012; Van Zadelhoff et al., 2011). The high strain on nursing home workers is expected to have increased during the Covid-19 pandemic. Previous research in the healthcare sector has shown that working hours have increased in the duration of the pandemic (Britt et al., 2021) resulting in increased job demands and job strain (Karasek, 1979). Furthermore, research has found that quarantine restrictions and lower social support due to the transmissibility of the virus (Britt et al., 2021) have resulted in less buffering conditions resulting in a higher degree of overall job strain (Karasek, 1979; Johnson & Hall, 1988; Van Yperen & Hagedoorn, 2003).

The method used to perform this research will be by performing a narrative systematic review. A narrative systematic review will allow for detailed summarization of both quantitative and qualitative literature (Abstract, 2007). The selection of articles is performed through carefully searching two electronic databases, namely 'PubMed' and 'Web of Science'. The former being a specifically medical database and the latter an interdisciplinary database to include, for example, management literature. The reason for selecting these databases is that they allow for searching through specified queries. The queries will be based on the previously outlined literature, which will be further discussed in the next chapter. Keywords and phrases will be used to create an all-encompassing list concerning nursing homes, Covid-19 and quality of work. The results that these queries yield will be assessed by prior formulated selection criteria, including that (1) the used literature is written in English, (2) the results report on nursing homes, Covid-19 and at least one aspect of quality of work, (3) the study finds empirical data, is (4) published in an academic journal and is peer-reviewed and (5) is performed in either the European union, United States of America, Canada or Oceania (excluding New-Guinea). There is no constraint on the publication date of the research, for the reason that Covid-19 research is not possible before its discovery in 2019. This means all literature that will be used is within a reasonable scope of recency.

The theoretical relevance of this research is imperative to the design of this research. This research attempts to function as a roadmap to the impact of the Covid-19 pandemic for nursing home staff. Research that has been done in this field concerns only partial information concerning a more elaborate concept. Previous empirical research has mainly focussed on, what can be described as, facets of quality of work. This research synthesises previous research into a more complete and generalisable description of the quality of work in nursing homes during the Covid-19 pandemic. Besides informing about the past situation

of Covid-19 and nursing home workers, this review will also advise future research to fill in the gaps that have been left by previous research.

As has become apparent from the theoretical outline previously stated, the impact that quality of work has on an individual's well-being is an important phenomenon to research. For this reason one can state that every situation in which quality of work might decrease is relevant to examine more closely. This research concerns an extensive global crisis situation with many direct and indirect consequences in society. For this reason, one can expect to find the influence of this global crisis has had an influence on the quality of work of employees. The described perspective this paper will offer is not only limited to academic use, but this paper will also have a practical purpose. This paper can be used to give tangible insight into the situation nursing homes find themselves in. It will also function in a supporting way to find best practices fitting crisis situations to prevent similar effects in the future.

In the next chapter the theoretical outline of this research will be further discussed. A theoretical definition and explanation of the key research concepts will be given. Chapter three will discuss the methods used for this research and the reason for using these methods. In the subsequent chapter the results of the research will be extensively explained. In the fifth chapter this research will interpret the results from the previous chapter to formulate a clear answer to the research question to conclude this research. Furthermore, a discussion concerning theoretical and practical implications; and limitations to this research will be presented.

2. Theoretical background

2.1 Theory on quality of work

The first definitions of Quality of Working Life focussed mainly on legislative actions taken to improve working conditions; such as child labour laws, the eight-hour work day and forty-hour work week (Walton, 1973). In the late 1960s and early 1970s quality of working life was broadly defined by five criteria, namely: (1) adequate and fair compensation, (2) safe and healthy working conditions, (3) immediate opportunity to use and develop human capacities, (4) future opportunity for continued growth and security and (5) social integration in the work organisation (Walton, 1973). During this period academic interest in one's job experience was growing and the well-being of employees and job satisfaction was increasingly researched (Nadler & Lawler, 1983). During this period several criticisms of current research to Quality of Working Life was that the concept was not concretely and firmly defined, leading to possible misunderstanding in literature and among managerial staff (Walton, 1973). However, at this time it was apparent that an increased quality of working life may lead to higher levels of commitment, lower levels of turnover and higher performance quality (Walton, 1973). Later quality of working life was broadly defined as “*the workplace strategies, operations and environment that promote and maintain employee satisfaction with an aim to improving working conditions for employees and organisational effectiveness for employers*” (Nasl Saraji & Dargahi, 2006, p. 9).

To measure quality of work, this paper will make use of job strain. Quality of work increases when job strain, both mental and physical, decreases (Carayon, 1993). As a predictor for job strain (Carayon, 1993), and thus quality of work, this research will make use of the Job Demands-Control-Support model as was first defined by Karasek (1979) and later refined by other authors to make the model more encompassing (Johnson & Hall, 1988; Häusser et al., 2010). Karasek posits that quality of work does not come from a single source but is rather an effect of the demand that is placed from a worker combined with the ability of the employee to make decisions themselves. This model lays a focus on the demand of the job and task in combination with the control/decision latitude one has in their job and combines this with social support present in the organisation.

2.1.1 The Job Demands-Control-Support model

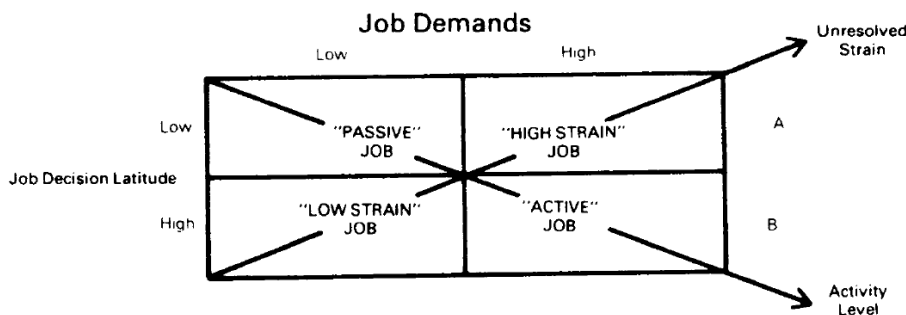
The Job Demands-Control model as first developed by Karasek was to better describe occupational stress (figure 1). Previous research primarily focussed on either job controls or the strain created by the work environment (Kain & Jex, 2010). The model as created by Robert Karasek (1979) was popularised due to the simplicity in use and the ability to test the model empirically (Kain & Jex, 2010). The model was initially designed to diagnose job strain, however the model can also be more generally used to constructively help job design and technology in favour of human needs and activity (Landsbergis, 1988). As stated above, Karasek sees quality of work as a combination between two aspects, namely: 'job demands' and 'job control'. When looking at the model as a whole, we see that the two aspects are placed on the two axes and vary between low and high (figure 1). As can be seen from the model below, four situations are distinguished, namely: 'passive job', 'high strain job', 'low strain job' and 'active job' (Karasek, 1979). The most stressful jobs are jobs called 'high strain jobs', these are jobs in which job control is low and job demands are high (Kain & Jex, 2010; Karasek, 1979). 'Active jobs' are occupations in which both job control and job demands are high. An outcome of this combination is that the negative work outcomes, strains, are mitigated by a high job control (Kain & Jex, 2010) and thus allowing for opportunity to engage in challenging tasks and learn new skills (Karasek, 1979). 'Passive jobs' are tasks in which both job control is low and job demands are low (Karasek, 1979). 'Low strain jobs' are jobs in which job demands are low and job control is high (Karasek, 1979). Following the Job Demands-Control model one may expect these types of jobs to result in the least amount of job strain (Kain & Jex, 2010). A failure to distinguish these two characteristics of the quality of work will result in an incomplete view of the job. At the source of this lies the fact that good conditions in, for example, job control can possibly negate the negative consequences of high job demands, and vice versa. The initial propositions by Karasek (1979) about the balance between the negative consequences of high job demands and positive consequences of high job control have been largely supported by empirical research (Kain & Jex, 2010). Initial negative consequences experienced by high job strain are referred to in literature as the 'strain hypothesis' (Häusser et al., 2010). Negative consequences of Job Demands will be further discussed in 2.1.2. as well as application to nursing homes. As previously stated, there is an interaction effect between the measure of job control and of job demands, in which high job control may mitigate the negative consequences of high job demand (Karasek, 1979; Kain & Jex, 2010). This effect, in contrast to the strain hypothesis, is called the 'buffer hypothesis'. These two hypotheses are therefore

not mutually exclusive and the buffer hypothesis may be recognized as a specific form or addition to the strain hypothesis (Häusser et al., 2010). In later writing, a third dimension was added to the Job Demands-Control model, namely social support, creating the Job Demands-Control-Support model. Social support moderates the negative impact of high strain caused by low control and high job demands (Häusser et al., 2010). This means that this further supports the buffer hypothesis, with the buffering effects of job control on job demands being most effective under conditions of high social support (Johnson & Hall, 1988; Häusser et al., 2010). After the addition of the social support dimension, the complete model looks differently than presented before in figure 1. The complete Job Demands-Control-Support model is shown in figure 2. Further reading in this section will provide a more detailed theoretical description of the aspects of the Job Demands-Control-Support model.

There have been several studies concerning the job strain in nursing homes. Effects on job strain have for example been found in leadership, social support, behavioural disturbances and job characteristics (Backman et al., 2018; Brodaty, Draper & Low, 2003). Job strain and stress that is experienced by the employees directly correlates to the quality of care the nurses give to the patients (Edvardson et al., 2009).

Figure 1

The Job Demands-Control Model



2.1.2 Job demands

The most common source of job demands are described as stressors in the workplace, which can be described as sources of stress in the organisation. The stressors that lie at the source of job demands are related to accomplishing work load, unexpected tasks and stressors of job-related personal conflict (Karasek, 1979). Furthermore, job demands can be described as the capacity of an individual worker to accomplish the work in a given period of time (Perrewe & Ganster, 1989). When job strain is too high, and the work exceeds the individual worker's capacity to perform the work in a given period of time, this results in an 'overload' (Perrewe

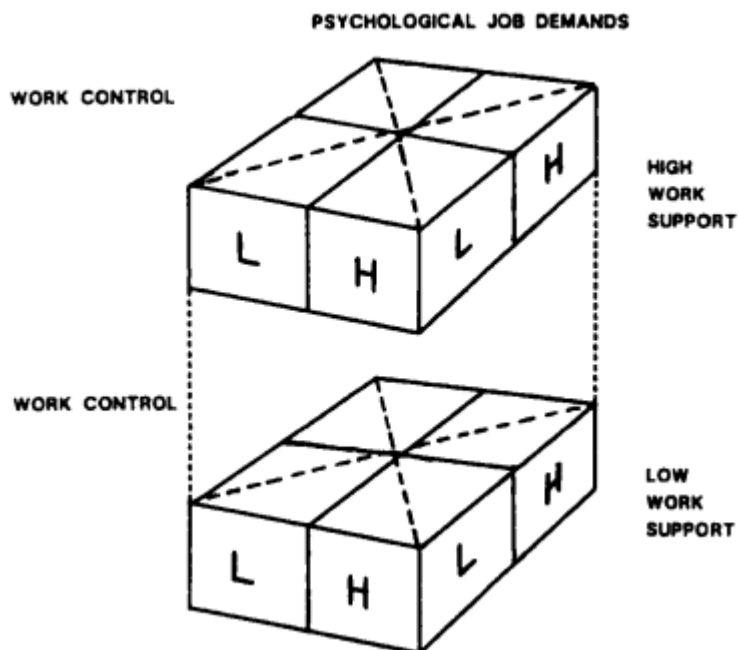
& Ganster, 1989). When job demands are too high this can lead to both psychological stress (e.g. embarrassment and loss of self-esteem) as well as physiological strain. Furthermore, job demands overload may result in more task errors (Perrewe & Ganster, 1989).

Research performed in a healthcare context in which high strain caused by increased job demands is experienced, shows that hospital nurses experience significantly lower structural empowerment and psychological empowerment, experience lower organisational commitment and are less satisfied with their jobs (Laschinger, Finegan, Shamian & Almost, 2001). In comparable research performed in healthcare contexts where job strain is lower, the effects were the opposite, with increased empowerment, higher commitment and more satisfaction (Laschinger, Finegan, Shamian & Almost, 2001). Further research points out that higher experienced job demands leads to a collective risk of exhaustion and lower patient satisfaction, especially in nursing staff (Huhtala, Geurts, Mauno & Feldt, 2021). At an individual level among healthcare nurses, high job demands can lead to lower work engagement (Huhtala, Geurts, Mauno & Feldt, 2021).

In a nursing home context, previous research has shown that job demands can be experienced as high and can result in absenteeism of employees. In nursing homes the workload is high (Schneider, Winter & Schreyögg, 2018). The main reason for the high job demands in nursing homes is the fact that many nursing homes are understaffed. There is a large demand for nursing home personnel, however not enough trained nurses to fill these positions and therefore the work, increasing the workload of the current working staff (Andrews & Dzięgielewski, 2005). This results in expectations towards the nursing staff to perform work that the staff is possibly not able to in the given time period, and thus leading to high job demands and possibly a job demand overload (Perrewe & Ganster, 1989). Research has shown that short-term solutions can be found in effective management, however this is not easy as the current workload is already high for the managing staff in nursing homes (Andrews & Dzięgielewski, 2005).

Figure 2

The Job Demands-Control-Support Model



2.1.3 Job Control

The decision latitude of tasks can briefly be described as a working individual's potential control over the tasks that need to be executed. In the model described by Karasek; Job control can be divided into three measurable variables, namely: 'decision authority', 'intellectual discretion' and further control problems. Decision authority describes how much formal control an individual has about making decisions concerning the way a task is performed. Intellectual discretion is about how much personal knowledge an employee is able to use in performing a task (Karasek, 1979). As previously stated, job control plays an important role to buffer the possible strenuous effects high job demand can have (Kain & Jex, 2010). Research shows that when job demand is high, high job control can limit the strenuous consequences of high job demand, such as fatigue (Van Yperen & Hagedoorn, 2003). Further control problems are deviations in that require extra interference (Vaas & Dhondt, 1995, p. 47). This means that control problems are problems that limit the control the individual has on performing their tasks. This research recognizes three concepts which, when insufficiently present, cause lower job control. These three concepts are task information, feedback and availability of resources (Vaas & Dhondt, 1995, p. 48)

When looking closer at the healthcare sector, research shows that job control can influence a positive relationship between empowerment and affective commitment, which in turn can prevent emotional exhaustion; the first step in the burnout process (Galletta et al., 2016). Other studies focusing on hospital nurses found more broader support for the buffering effect of high job control. Research found that hospital nurses felt more psychologically empowered and experienced their work as more meaningful when they had a higher measure of job control (Laschinger, Finegan, Shamian & Almost, 2001). Furthermore, it was found that the hospital nurses experiencing a high measure of job control have greater confidence in the work that they perform, report a higher measure of autonomy and experience that they make a greater impact through their work (Laschinger et al., 2001).

Research by McGilton et al. (2007), performed in a nursing home context, has shown that there also is a direct correlation between the way nursing staff is supervised and their satisfaction on the job. Personal safety is a concern and lack of personal safety causes feelings of unsafety within the nursing staff (Andrews & Dzięgielewski, 2005). This was an issue before the Covid-19 pandemic and can therefore be expected to have only increased over time. An example of Job control is autonomy. Autonomy can be split into three different forms of autonomy. The first form of autonomy is scheduling autonomy, which is how much influence the workers have over decisions concerning their work schedule, in what order to perform tasks and how much the job allows for personal planning (Morgenson & Humphrey, 2006). A second form of work autonomy is decision-making authority, which implies how much personal initiative or judgement can be carried out, if the job allows for making their own decisions and if there is enough autonomy to make this decision (Morgenson & Humphrey, 2006). Thirdly, work method autonomy is how much a job allows for making decisions about what methods the workers use to complete work and the job giving enough opportunity for independence and freedom in how to do the work.

2.1.4 Social support

In the 1980s another dimension was added, completing the Job Demands-Control-Support model as it is presented in this research (figure 2). Social support is defined as the “*overall levels of helpful social interaction available on the job from co-workers and supervisors*” (Karasek & Theorell, 1990, p. 69). The social support dimension further mitigates the effect of job demands and job control on the total job strain (Johnson & Hall, 1988). From previous research it appears that low control and high social support can buffer the strenuous effects of

high job demands and low control (Johnson & Hall, 1998; Sanne, Mykletun, Dahl, Moen & Tell, 2005). Further research also suggests that social support between co-workers has a moderate to high effect on the outcomes resulting from the relationship between job control and job demands (Van Yperen & Hagedoorn, 2003). The same moderate to high effect has been measured in supervisory and co-worker support (Van Yperen & Hagedoorn, 2003). What is seen in research is that high job control is necessary to limit job strain from high job demands. However, high social support (or high job control) can increase intrinsic work motivation in employees (Van Yperen & Hagedoorn, 2003). However, social support is a more complex dimension than job demands and job control because social support only buffers job strain resulting from job demands and control when this is well matched with the strain causing events (Van Yperen & Hagedoorn, 2003).

Research performed in the healthcare sector showed that a higher degree of social support increases the positive effects of job control on the exhaustion of workers (De Jonge, Janseen & Van Breukelen, 1996). Meaning that increasing autonomy in the workplace in combination with high work-related social support decreases feelings of emotional exhaustion and therefore leads to fewer health complaints (De Jonge, Janseen & Van Breukelen, 1996). Furthermore, findings in previous research show that a main source of emotional exhaustion is the combination of high job demands with low social support (De Jonge, Janseen & Van Breukelen, 1996).

In a nursing home context this applies to the importance of the relationship between the manager and the nurses, as well as the relationship between nurses (McGilton, 2007). Social support can include many things including the opportunity to develop close friendships and get to know your colleagues, having a supervisor or colleagues concerned about your personal welfare and if the people you are working with are friendly (Morgenson & Humphrey, 2006)

In table 1 below there is described how the discussed theories concerning quality of work can be dissected into key words or phrases. In the next chapter these terms will be further discussed and how this will aid towards the data collection of this research.

Table 1*Outline: Quality of Work*

Quality of work	Job demands	Workload <ul style="list-style-type: none"> - Accomplishment of work - Lack of breaks Unexpected tasks Job-related personal conflict
	Job control	Decision authority <ul style="list-style-type: none"> - Formal control - Making decisions - Autonomy Intellectual discretion <ul style="list-style-type: none"> - Personal knowledge Control problems <ul style="list-style-type: none"> - Task information - Feedback - Availability of resources
	Social support	Level of social support by co-workers Level of social support by supervisor

2.2 Crisis situations

A crisis situation can be very broadly described as a situation in which accidental or formed factors determine the appearance of the critical moment in an organisation and are disturbing the functioning of the normal system (Valuckiene & Virbickaite, 2011; Peter, 1995; Pearson & Clair, 1998; Clark, 1995). This definition describes a moment in time which has a start and an end; and which negatively affects the day to day operations within an organisation. When one looks at the Covid-19 pandemic one is able to apply this definition. The pandemic was an ending situation which has greatly affected the normal operations in nursing homes. Global research has shown that the pandemic has clearly shown the interdependence of nursing

homes on other healthcare organisations and state funding, lack standardized guidelines and severely showing the employee shortages (Thompson et al., 2020). Day to day practices are affected by the Covid-19 pandemic in several ways, such as the obligation to keep residents in solitary confinement due to the risk they are to others or others are to them; or limitation in visitation for family of the residents (Lynn, 2020)

Three key concepts that are distinguished in crisis literature are ‘threat’, ‘uncertainty’ and ‘urgency’. Threat is described as the endangerment of commonly shared values (Boin, ‘t Hart & Kuipers, 2007). In the case of the Covid-19 pandemic, one that is endangered is the value of personal safety and health. Urgency refers to the sense of crisis that people experience. When urgency is high and the threat poses immediate problems to society the sense of crisis is high (Boin, ‘ Hart, Kuipers, 2007). The Covid-19 pandemic is affecting everyone in their daily lives albeit through disease or limitation of freedom, and therefore this can be seen as urgent. Lastly, the degree of uncertainty describes both the uncertainty towards the nature of the threat as well as the possible consequences of the threat (Boin, ‘t Hart & Kuipers, 2007). While for the Covid-19 crisis the source of the threat is relatively known (WHO, n.d.) the potential effects the crisis has on society are unpredictable both in direct effect of the virus as well as the duration of the crisis and the control measures in effect.

As mentioned in the first paragraph, the situation in nursing homes is under constraints under the effects of the Covid-19 pandemic. The normal organisational processes are disrupted in various ways and problems that were already present before the crisis are highlighted.

2.3 Quality of work in crisis situations

Job demands in crisis situations can be expected to increase. When defining a crisis situation through the aforementioned definition of critical moments in an organisation that are disturbing the normal functioning of the normal system (Valuckiene & Virbickaite, 2011; Peters, 1995; Pearson & Clair, 1998; Clark, 1995), one can reason that a crisis situation requires altered or additional courses of action. In the previously given definition of job demands, three stressors can be distinguished causing job strain as a result of job demands. Namely: work load, unexpected tasks and job-related personal conflict (Karasek, 1979). A crisis situation thus required the organisation to change tasks due to the normal functioning of the system being lost, requiring the creation of unexpected tasks and possibly increasing workload.

Job control can be expected to decrease in crisis situations. Previously mentioned are two key variables describing job control, namely: ‘decision authority’ and ‘intellectual discretion’ (Karasek, 1979). Decision authority, the formal control an individual has about making decisions concerning the way a task is performed (Karasek 1979), may be under pressure in crisis situations. At the same time the employee’s intellectual discretion will be under pressure. Crisis situations require an altered way of working due to the loss of normal functioning in a system (Valuckiene & Virbickaite, 2011; Peters, 1995; Pearson & Clair, 1998; Clark, 1995). Intellectual discretion is the amount of personal knowledge an employee is able to use in performing a task (Karasek 1979). Due to the uncertain nature of crisis situations (Boin, ‘ Hart, Kuipers, 2007) one can expect required knowledge in work to change, thus affecting intellectual discretion. Together, possible limited decision authority and limited intellectual discretion can therefore negatively affect job control in crisis situations.

The uncertain character of crisis situations (Boin, ‘t Hart & Kuipers, 2007) combined with the loss of normal functioning of the system (Valuckiene & Virbickaite, 2011; Peters, 1995; Pearson & Clair, 1998; Clark, 1995) has a negative effect on social support in the organisation. The lack of normal functioning of the organisation may limit the overall levels of helpful social interactions in the organisation, required for social support (Karasek & Theorell, 1990, p. 69). Furthermore, previously the complexity of the social support dimension was discussed, making apparent that the social support dimension of the Job Demands-Control-Support model only has a buffering effect on job strain when social support is well matched with strain causing events (Van Yperen & Hagedoorn, 2003). Due to the uncertain character of crisis situations, it is therefore uncertain if in place social support functions in the organisation are matched to the strains caused by the crisis situation. Therefore one can conclude that crisis situations have an uncertain and possibly negative effect on the social support dimension and therefore the buffering effect of this dimension on job strain.

In crisis situations job demands increase and social support and job control are under stress and become uncertain in crisis situations. The increased job demands increase job strain. Without the buffering dimensions of job control and social support to limit this job strain, a crisis situation can therefore lead to more emotional exhaustion and other negative work outcomes such as burn-outs (Galletta et al., 2016).

In the previous section negative consequences of a decreased quality of work are outlined. Higher job demands result in lower empowerment, lower organisational commitment and less job satisfaction (Laschinger, Finegan, Shamian & Almost, 2001). The lack of social support to buffer the job demands resulting from a crisis situation can lead to emotional exhaustion (De Jonge, Janseen & Van Breukelen, 1996). These effects are further increased by the limited job control the individual may experience in crisis situations.

2.4 Quality of work during the Covid-19 pandemic in healthcare

During the Covid-19 pandemic, the healthcare sector has seen an increase in hours worked per week (Britt et al., 2021) resulting in a higher workload. The Covid-19 pandemic has also seen restrictions within the healthcare sector on, for example, visitation of patients and keeping distance from patients. These measures to decrease the spread of Covid-19 have to be taken into account while working and therefore result in unexpected additional tasks. These two factors result in a higher job demand (Karasek, 1979) and therefore increase job strain (Laschinger, Finegan, Shamian & Almost, 2001).

Further restrictions to prevent the spread of Covid-19 concern quarantining workers with symptoms or a positive test result for Covid-19. These quarantine requirements limit the decision authority healthcare employees experience in their work and therefore limit job control (Britt et al., 2021).

Research has shown that social support is in a difficult position during the Covid-19 pandemic. While social support functions as an important buffering dimension towards job strain, due to the transmissibility of the virus, seeking out social support is limited due to the fear of getting others sick. Resulting in an inability to share concerns about the pandemic with others. This may result in the reception of social support causing increased strain (Britt et al., 2021).

Following these findings, one can conclude that quality of work has been under stress during the Covid-19 pandemic. An increased job demand increases job strain (Karasek 1979) and decreased job control combined with a lack of social support will result in negative work outcomes such as psychological stress, emotional exhaustion and physiological strain (Perrewe & Ganster, 1989; De Jonge, Janseen & Van Breukelen, 1996).

3. Methods

The type of research that this research has conducted is a narrative systematic review. A narrative systematic review gives a detailed summarization of studies from which conclusions are drawn into a holistic interpretation (Abstract, 2007). This is based on existing theories as discussed in the previous chapter. A narrative systematic review allows for the use of both qualitative and quantitative literature to be included in this research (Abstract, 2007). A narrative systematic review synthesises the best literature available concerning the topic at hand. The reason that this style of research is selected is to create a more generalizable research outcome (Harris et al., 2013). Due to the broadly generalizable character of this study and the presence of partial results from previous research, new primary research does not provide answers for the research question in a satisfactory manner (Suri, 2020). Furthermore, a narrative systematic review suits the topics that are at the core of this research, namely: nursing homes, Covid-19 and quality of work. For this reason, a review of pre-existing research about the phenomenon at hand is the best way to answer the research question of this research:

“What was the influence of the Covid-19 pandemic on the quality of work of nursing home workers”

The systematic review that is conducted will carefully identify, select, synthesise and appraise all used literature (Harris et al., 2013; Suri, 2020).

3.1 Search strategy

The literature that is used for this research is found using two methods. The first, initial method is by searching two electronic databases, namely: ‘PubMed’ and ‘Web of Science’ (Vermeerbergen et al., 2017; Suri, 2020). The reason for selecting these databases is that they allow for searching through specified queries. PubMed is selected because this database includes mainly medical articles and is therefore suited to find articles concerning nursing homes and nursing care. Web of Science is selected because this is a broader, interdisciplinary data base. This allows for this research to reach beyond medical studies and find, for example, more business focussed research. The electronic databases is purposefully searched using predetermined search queries. The electronic database search consists of four queries. The first three queries are composed to reflect the three main topics from the research question, namely: ‘nursing homes’, ‘Covid-19’ and ‘Quality of work’. The fourth query combines all previous queries to find articles that contain at least one search term from each query. The queries can be found in attachment A and B. The search terms from these

queries are applied to the title of the literature and the abstract of the literature. The content of the queries is abstracted from the previous chapter in which a detailed theoretical outline is given for each topic.

The second method of finding literature for this systematic review was through carefully examining used sources from literature found through the electronic database search. Through careful examination, potential additional studies are identified (Vermeerbergen et al. 2017; Suri, 2020). After extensive search, the found articles have been reviewed and duplicates are eliminated from the research. Further information towards selection, elimination and addition of articles can be found in figure 3.

3.2 Inclusion and exclusion criteria

To qualify for incorporation in this systematic review, the literature needs to meet five predetermined inclusion and exclusion criteria:

1. The article is written in English
2. The article is written in the European Union, Great Britain, The United States, Canada or Oceania
3. The study reports the impact of Covid-19 on (an aspect of) quality of work in nursing homes
4. The article yields empirical results
5. The study is published in a peer reviewed journal

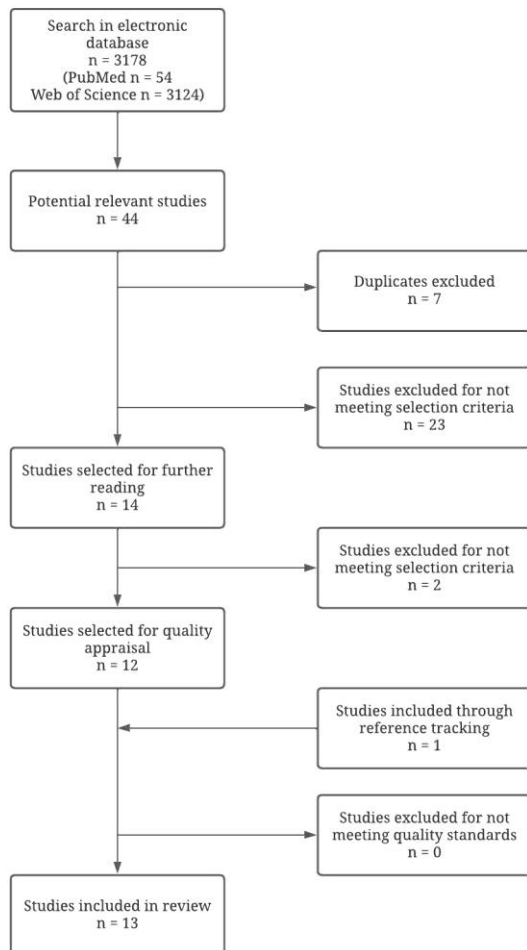
Furthermore, literature has been excluded when the research did not explicitly include the nursing home sector, Covid-19 and an aspect of quality of work as defined in this research. Due to the recency of the Covid-19 pandemic, this research does not include predetermined limitations concerning the publication date of studies. These selection criteria are formulated to create restrictions on the articles used for this review and have been shaped by the conceptual framework of this research (Suri, 2020).

3.3 Quality assessment

Following the selection of eligible studies, the literature has been be critically appraised on research quality. The quality appraisal is based upon the ‘Qualitative Assessment and Review Instrument’ (Hannes et al., 2020) for qualitative research, and the ‘Quality Assessment Tool for Quantitative Studies’ (Thomas et al., 2004) will be used for quantitative research.

Figure 3

PRISMA flow diagram: In-/exclusion of studies



3.4 Data analysis

Once the literature was carefully selected and screened for eligibility, the characteristics and empirical findings of each individual research have been reported in two stages by using a standardised data-extraction form. (Vermeerbergen et al., 2017). In the first stage the characteristics of the study are collected. This includes (1) the authors of the study, (2) the year of publication, (3) the country of publication, (4) whether the study has a qualitative or quantitative approach, (5) number of participants, (Vermeerbergen, 2017). Reporting this data is done in a systematic manner and with the use of the format as seen in table 2. This first stage of data reporting is important because different methodologies used in the studies may result in different results; and therefore influence the outcome of this research (Suri, 2020).

In the second stage of data analysis, data is extracted from the used literature. This concerns comparative data on nursing home worker's experience of quality of work during the Covid-

19 pandemic. The results of each study that is used is be carefully described so the results can be synthesised (Suri, 2020). This data is also available in table 2. Due to the heterogeneous nature of the dimensions used, meta-synthesis of qualitative studies or a meta-analysis of quantitative studies was not possible (Vermeerbergen, 2017). For this reason the findings are reported using a narrative review approach, which is applied to each quality of work dimension.

3.5 Research ethics

For this research an objective position towards the literature that is be used has to be adopted. This is to avoid outcome or confirmatory biases. Furthermore, the quality appraisal of the used literature is done to such an extent that possible biases in used literature are acknowledged and avoided (Suri, 2020). Further biases that can occur in this research may be an interpretation bias. Despite this review only utilizing finding of published articles and no self-reported data, weighing and comparing findings may be influenced. Another factor that could possibly be influencing the outcomes of this research is the heavy politicization of the Covid-19 pandemic. Politicization of this topic may influence opinions of the researcher and therefore possibly (unconsciously) influence the result of this study.

For these reasons, this research attempts to be as transparent as possible in the search methods, quality appraisal and addition and omission of studies used for this research; as well as the reporting and interpretation of results.

Table 2*Contents of Systematic Review*

Author (year) country	Type of study	Number of participants	Outcome measures	Main findings
Hering et al. (2022) Germany	Quantitative	n = 811	Psychosocial burden, depression, anxiety, stress	- 94.2% reported an increase in working demands - 59.1% showed relevant levels of stress, anxiety and depression - Link between Covid-19 and dissatisfaction with management, anxiety, social support, sense of community
Cimarolli et al. (2022) United States	Quantitative	n = 1,730	Stress levels, quality of communication, preparedness to care for residents	- High quality communication and optimal preparedness mediates effect of Covid-19 on resignation
Brady et al. (2021) Ireland	Quantitative	n = 390	mental health outcomes, work ability	- 45.1% reported moderate to severe post-traumatic stress symptoms, significantly more nurses reported a decrease in frame of mind, higher degree of moral injury, insufficient work ability
Van Dijk et al. (2022) The Netherlands	Quantitative	n = 1,669	job demands, work functioning, depressive symptoms, burnout	- 19.1% higher levels of depressive symptoms - 22,2% increase in burnout

				- Job demand, work functioning, depressive symptoms increased but there is a difference between participants
Prados et al. (2020) Spain	Quantitative	n = 340	sense of coherence, social support, personal accomplishment	- Sense of coherence highly predicts burnouts - Social support and availability of resources have a protective effect - Increase in working hours has a negative effect on the working staff
Blanco-Donoso et al. (2020) Spain	Quantitative	n = 335	emotional exhaustion, fear of contagion, professional satisfaction, social support at work	- High levels of satisfaction - Social pressure, contact with suffering, emotional exhaustion are negatively associated with satisfaction - Social support promotes professional satisfaction
Blanco-Donoso et al. (2021) Spain	Quantitative	n = 228	work stressors, job resources, fear of contagion, traumatic stress	- High levels of workload, social pressure from work, contact with suffering, fear of contagion - Social pressure, exposure to suffering, lack of personnel and PPE, minimal supervisor support significant in explaining traumatic stress - Supervisor and co-worker support moderated some of these relationships
Snyder et al. (2021) United States	Qualitative	n = 110	Fear of another outbreak, concerns about mental wellbeing of staff, concerns about mental wellbeing of	- Staffing problems were an important theme; the pandemic has an effect on emotional well-being

			residents, concerns about staffing capacity and future workforce development	<ul style="list-style-type: none"> - Increase in stress, responsibilities, time needed to complete jobs - Lack of guidance - Frequently changing protocols
Hoedl et al. (2021) Austria	Qualitative	n = 18	decision making, social working environment, physical consequences, psychological consequences, social consequences, quantitative workload, qualitative workload, work organisation	<ul style="list-style-type: none"> - Qualitative workload and work organization are concerns - Qualitative workload came from additional tasks - Psychological consequences such as uncertainty, fear and stress
Dohmen et al. (2022) The Netherlands	Qualitative	n = 424	care staff's approach to care, mitigation measures alter care staff's approach to care, impact of Covid-19 on residents' wellbeing; impact of Covid-19 on care staff's wellbeing	<ul style="list-style-type: none"> - Main focus of staff is wellbeing of residents - Covid-19 mitigation measures are experienced as obstructions to good care - Care staff experiences internal conflict enforcing mitigation measures
Nyashanu et al. (2020) United Kingdom	Qualitative	n = 40	Preparedness, availability of resources, stress, unexpected tasks, workload	<ul style="list-style-type: none"> - Challenges arose in lack of preparedness, shortage of PPE, anxiety and fear, delay in testing, evolving PPE guidance and shortage of staff
Rutten et al. (2021) The Netherlands	Qualitative	n = 29	Structure, work-life balance, social support, quality of care	<ul style="list-style-type: none"> - Loss of daily working structure - Interference in work and private life

				<ul style="list-style-type: none"> - Social support by the team and management is important - Mitigation measures have a severe effect on quality of care
Leskovic et al. (2020) Slovakia	Quantitative	n = 781	Burnout, emotional exhaustion, depersonalization, personal accomplishment	<ul style="list-style-type: none"> - Intensified emotional exhaustion - Lack of personal accomplishment - Job satisfaction is related to direct effects of changing working conditions

4. Results

This chapter discusses the results found in the selected articles. The results concern the main topic of this paper, namely the effect of the Covid-19 pandemic on the quality of work of nursing home staff. This chapter discusses quality of working life in three sections. These three sections are the three dimensions of quality of working life as discussed in chapter two, namely: Job demands, job control and social support.

4.1 Job Demands

Job demands can be described as stressors in the workplace. The stressors at the source of job demands are workload, unexpected tasks and stressors of job-related personal conflict. Job demands include the ability of an individual to accomplish the work in a given period of time. High job demands can lead to psychological stress and physiological strain. Previous research in a nursing home setting has shown that main reasons for strain resulting from job demands is the lack of staff, causing an increase in workload.

4.1.1 Workload

Multiple qualitative studies reported an increase in the workload during the Covid-19 pandemic (Hoedl et al., 2021; Snyder et al., 2021). One of the main reasons that was stated for an increased workload was that there is not enough staff available to perform every task that needs to be performed during the day.

“(...) you also notice that some people like to be kept busy, but there is not enough time. And you noticed that at the time when there was no one, when there was NO ONE there. ... I think there is also a lack of staff, so that you simply have someone who really sits down or plays Ludo” (Hoedl et al., 2021, p. 5)

The above citation comes from a qualitative study performed by Hoedl et al. (2021), showing that being understaffed is one of the consequences of the Covid-19 pandemic. Consequences of the lack of nursing home staff is underlined by the research of Rachel Snyder, in which a staff member describes:

“if we had more hands on, it could have prevented a lot of things that happened due to COVID” (Snyder et al., 2021, p. 7)

The citation above shows that, because of the lack of staff, the direct consequences of Covid-19 increased. An increase in task errors is a well reported consequence of an overload of job demands (Perrewe & Ganster, 1989) and appears to hold true for the situation in nursing homes during Covid-19.

The reason for the absence however, is not a direct consequence of illness due to Covid-19 but rather a consequence of the mitigation measures that have been placed to prevent Covid-19 from spreading.

“There is severe shortage of staff due to absence of staff who might choose to self-isolate once they have a cough not knowing whether it is COVID-19 or not honestly, sometimes shifts are so heavy to do.” (Nyashanu et al., 2020, p. 658)

The citation from a male nurse in the research of Nyashanu et al. (2020) again underlines an increased workload due to a shortage in nursing staff. However, the research and above citation highlight the lack of staff to be a consequence of self-isolation measures and a shortage in testing opportunities.

Several quantitative studies that are used for this review indicate an increase in workload for nursing home staff. The most extreme result is found in the study by Hering et al. (2022), in which 94,2 percent of respondents indicated an increase in work demands. Whilst results had found that the impact of an increased workload appears to vary between demographic groups, an increase in workload is reported nonetheless. The subjectiveness of the impact of the higher workload is also corroborated by the study by Van Dijk et al. (2022) describing that the impact of higher workload is dependent on the individual’s experience and worries throughout the Covid-19 pandemic. Research by Blanco-Donoso et al. (2021) as well as previous research by Blanco-Donoso et al. (2020) reports higher than usual workload during the Covid-19 pandemic.

Another reason that has been stated to increase experienced workload is an increase in working hours. In the research by Manuela Hoedl staff describes:

“You go home, you take a shower, you sleep, you go back to work. And the fifth day is still okay, and from the sixth day on you just function, I think” (Hoedl et al., 2021, p. 6)

The citation above describes a situation in which a lack of breaks from work and free-time causes the workload to increase beyond what is desirable. Extreme accounts of the lack of breaks appear in research by Nyashanu, describing a situation in which nursing home staff have spent five weeks living at the workplace. A similar description is given in the qualitative research by Leskovic et al. (2020) in which a situation has been described in which no coffee or smoke breaks were allowed during work hours because of strict mitigation measures. One respondent even indicated that:

“This is not normal. You start to sweat, your glasses are dewy, everything hurts, you are completely exhausted. ... you can’t regenerate because you can’t go home.” (Leskovic et al., 2020, p. 668)

The citations above indicate a further example of an extreme lack of breaks experienced by nursing home staff, thus increasing workload significantly. Consequences of the increase in working hours is underlined by research by Prados et al. (2021) which found that this leads to inadequate responses to stressful situations; and increased levels of emotional exhaustion and depersonalization.

The increase in workload due to a lack of breaks again does not reflect direct consequences of illness but rather a consequence of the measures taken to avoid spreading the illness.

4.1.2 Unexpected tasks

When examining the selected literature one finds many examples of unexpected and additional tasks that had to be performed during the Covid-19 pandemic. The article by Snyder et al. (2021) describes a situation in which protocols and policies continuously change. This results in confusion among the nursing staff. In the article by Nyashanu et al. (2020) a staff member describes the situation as:

“There are so many changes that are coming every day, today is one thing tomorrow is another one what are the guidance really? It really confuses and panics me” (Nyashanu et al., 2020, p. 658)

The citation above mainly highlights the difficulty in the continuously changing demands that are made concerning personal protective equipment. The findings by Nyashanu et al. (2020) concerning the consequences of additional unexpected tasks are supported in the research by Rutten et al. (2021) describing in which a respondent describes:

“The pressure at work got high and I felt like a fully packed mule the past weeks. We got more and more tasks and received no help from other colleagues of the other wards” (Rutten et al., 2021, p. 6)

The unexpected tasks that are added to the already existing tasks for nursing home staff causes a loss of daily structure and routine (Rutten et al., 2021). Below this paper will highlight several additional tasks which appeared throughout several papers selected for this review.

Firstly, the additional tasks that are described are enforcing the social distancing requirements. Enforcing these requirements takes time and energy from nursing staff. The additional task of enforcing social distancing measures is to ensure the residents wellbeing, however this is not an easy feat to make clear to the residents. In the research by Nyashanu et al. (2020) one respondent describes:

“Remember we care for people living with different conditions from dementia to learning abilities . . . it is so difficult for such individuals to stay apart from staff and their counterparts” (Nyashanu et al., 2020, p. 657)

The research by Hoedl et al. (2021) describes the additional tasks of nursing home staff as reminding residents of implemented measures and organising and monitoring social distancing and isolation measures. The enforcement of the social distancing measures is burdensome one the staff because the residents of the nursing home feel restricted in their daily lives and routines, some even feeling imprisoned (Hoedl et al., 2021)

Secondly, due to the instated mitigation measures in the nursing homes, the mood and behaviour of residents changed. The article by Hoedl et al. (2021) describes a larger need for residents to be helped with simple tasks that residents would previously do themselves. In the article an example is described of a resident needing help with pouring something to drink of which a jug is placed on the table near the resident.

Further additional tasks concerning changing in behaviour may take on more extreme forms. The article by Dohmen et al. (2022) describes a situation in which residents were easily frustrated with each other, in instances this led to verbal or physical aggression. The nursing home staff had an increased responsibility to serve as mediators between residents. The article by Hoedl et al. (2021) specifically mentions the additional duty for the nursing staff to

calm residents down. Another additional task in line with this is an increased continuous consideration of the resident's mental health. In the research of Snyder et al. (2021) a respondent stated:

“we're kind of running emotional support too, trying to be there for the residents while trying to take care of everything else”. (Snyder et al., 2021, p. 6)

The citation above indicates that the task of emotional support is seen as additional to other tasks that need to be performed by the nursing staff.

A third type of additional tasks that are described concerns the family members of the residents. During the pandemic, visitation was restricted. This means that the nursing home staff had to take on a crucial role concerning facilitation of contact between residents and family, instead of solely a supportive role (Dohmen et al., 2022). These tasks included mainly establishing digital connections between residents and family. Furthermore, the contact with the family of the residents includes a predominantly negative tone because the nursing staff are the ones that need to bring bad news to the family concerning further restrictions. The difficult additional task of informing families of bad news is described in several papers, including the research of Hoedl et al. (2021), Dohmen et al. (2022) and Rutten et al. (2021).

To conclude, the unexpected additional tasks that nursing staff were required to take up were, similarly to workload, not a direct consequence of illness due to Covid-19 but rather an effect of having to enforce mitigation measures or the effects of mitigation measures on the residents.

4.1.3 Other causes of stress

In several studies, strain on the job is also described as a mental strain due to the more direct consequences of Covid-19. The direct effects of Covid-19 illness on the residents is a worry that is expected to be found in the selected papers for this study. However, one may find that this is limited compared to the negative effects of the mitigation measures. In the research of Hoedl et al. (2021) one staff member states that:

“But there is just fear. Because I do not want to infect anyone in any way that will cause them to die because of it. So that was my fear” (Hoedl et al., 2021, p. 6)

This indicates that staff members fear infecting the residents.

When comparing the fear of infection found in the research of Hoedl et al. (2021) to the other qualitative research used in this review, one finds little corroborative evidence. When examining the data used by Dohmen et al. (2022) one finds that only three of the 62 narratives used were about the impact of the disease itself and the other 59 about the impact of the mitigation measures. When talking about fear of infection from Covid-19 at the workplace, 75% of the participants of the focus groups in the paper of Snyder et al. (2021) indicate that the risk of contracting Covid-19 is higher outside of the facility.

A quantitative paper by Brady et al. (2021), however, highlights an increase in job pressure directly related to illness caused by Covid-19. This study concludes emotional exhaustion from witnessing deaths first hand. This is mainly the case for staff members with close bonds to residents, however this may vary across staff due to coping styles by the individuals.

4.2 Job control

Job control entails an individual's potential control over the task that needs to be executed. Job control can be divided into two variables, namely: 'decision authority' and 'intellectual discretion'. The former describes the formal control an individual has about making decisions concerning the way tasks are performed. Intellectual discretion concerning how much personal knowledge an individual is able to use in performing a task.

4.2.1 Decision authority

As described in the previous section, the main factor influencing job demands was not a direct consequence of Covid-19 but rather the mitigation measures that have been put in place. Similar to job demands, decision authority is affected by mitigation measures that are put into place. Several papers highlight accounts of staff describing situations in which the mitigation measure limits their own ability of making decisions. Dohmen et al. (2022) finds that mitigation measures hinder staff from meeting the needs of residents and in some situations require the staff to "*actively contribute to negative experiences for residents*" (Dohmen et al., 2022, p.7). An example of this is a respondent telling:

"A resident grabbed my hand and asked me not to leave her. She wanted to come with me to the other ward. Unfortunately that is not possible during corona. Such a difficult moment. I truly had a hard time having to leave her behind". (Dohmen et al., 2022, p. 7)

The citation above describes a situation in which nursing staff is not able to perform the job in a way that is seen as ideal. This shows that due to the mitigation measures in place the staff has no authority to decide how to perform a task, but rather having to adhere to strict rules.

The root issue in this case are the mitigation measures that are in place. However, the placement of these measures and how to enact these measures also appear to cause a decrease in experienced decision authority by nursing staff. Research by Rutten et al. (2021), for placed guidelines and application to be less disruptive, nursing home staff express an explicit desire to be included in the decision making process. Implying the fact that the decision making process is too limited to management. This is corroborated by research by Hering et al. (2022) stating that nursing staff did not feel involved in decision making processes and therefore experienced feeling less heard by management.

4.2.2 *Intellectual discretion*

When discussing the personal knowledge that staff can use during the pandemic, research by Dohmen et al. (2022) finds that the ability of staff to apply personal knowledge is necessary to be able to continue to ensure quality of care during the Covid-19 pandemic. Being able to use personal knowledge in a nursing home setting during Covid-19 is found to increase a focus on the needs of residents instead of having to focus on limitations. A respondent in the research by Dohmen et al. (2022) states:

“A resident’s happy face during the daily care. I know that this resident used to teach English and loves music very much. During the daily care, I started talking English to her and my colleague joined in. We spontaneously started singing a song in English and the resident sang along at the top of her lungs. After the song, she said how much she liked it. A wonderful and beautiful experience, so much happiness” (Dohmen et al., 2022, p. 6)

The situation described above is a clear example of how personal knowledge of a staff member is used to find an opportunity to improve care for the patients. When previously discussing decision authority it was clearly highlighted that mitigation measures limit the options staff have. Because the job context allows for use of personal knowledge the effects of limited decision authority may be mitigated.

4.2.3 Task information

When discussing job control, a large factor influencing job control within a nursing home context during the Covid-19 pandemic has appeared to be task information. Within multiple studies used for this review, task information was clearly highlighted. According to research by Snyder et al. (2021), a lack of training or education was the second most important barrier during the Covid-19 pandemic. In this research, multiple respondents of this study described:

“a lack of consistent and systematic guidance resulting in rapidly changing facility infection prevention protocols.” (Snyder et al., 2021, p. 12)

Other qualitative research used for this review highlights the difference in effects of clear task information and unclear task information. Focus groups performed by Rutten et al. (2021) showed that there appeared to be ambiguous communication about new measures and additional tasks. This mainly concerns the use of personal protection equipment. With one respondent stating:

“Everybody [of the team] gets the same email [with instructions] and it [the rules and measures] is still unclear” (Rutten et al., 2021, p. 4)

Further description of this problem by Rutten et al. (2021) addresses that with the high frequency of changes in measures and a lack of clear communication leads to insecurity and uncertainty among staff members.

The research by Hoedl et al. (2021) confirms that unclear information about mitigation measures and personal protective equipment create feelings of uncertainty, leading to psychological concern. However, Hoedl et al. (2021) also found that nurses and nursing aides were generally of the opinion that they had been clearly informed by the organisation, as opposed to the respondents from research by Rutten et al. (2021). The main difference one finds is the way of communication. In research by Rutten et al. (2021) the only form of communication to distribute task information is email. In research by Hoedl et al. (2021) information is distributed through multiple channels such as verbal instructions in teams, information made available at an InfoPoint in the facility, email, information sent through electronic information systems and written information in guidelines handed out to every staff member. The task information was supplied by staff specialised in the field, with one respondent describing:

“A video was made and sent out by the hygienist. The staff were able to repeatedly have a look at this video on their wars, (...), how do I put this on correctly” (Hoedl et al., 2021, p. 5)

The citation above demonstrates how clear information is appreciated by nursing staff, allows them to perform tasks well and avoids uncertainty. This is in line with quantitative research performed by Van Dijk et al. (2022), describing the importance of facilitating clear and updated communication throughout the organisation. Further consequences of clear communication are highlighted by research by Cimarolli et al. (2022) describing that better communication mitigates the negative effect of other stressors caused by the Covid-19 pandemic. This is elaborated by stating that staff felt more adequately prepared to care for residents when communication was perceived as qualitatively better (Cimarolli et al., 2022). On the other hand, Cimarolli et al. (2022) describe that when organisational communication is qualitatively poor, job performance is experienced as more stressful. This means that through sufficient communication the organisation has great influence on the perceived stress and uncertainty experienced by the nursing staff.

4.2.4 Control problem: Resources

The last effect this review identified concerning job control is the (un)availability of resources. Multiple studies conclude that, during the Covid-19 pandemic, nursing homes and thus its staff experienced a shortage in personal protective equipment. The scarcity of this equipment appears to be larger than in a general hospital setting (Brady et al., 2021). In qualitative research by Prados et al. (2021) a difficulty in obtaining resources is also underlined. It is stated that not having the necessary resources is a factor that can lead to emotional exhaustion and depersonalization. Corroborative evidence of a shortage in personal protective equipment can be found in multiple other studies (Leskovic et al., 2020; Hering et al., 2022; Blanco-Donoso et al., 2020).

Despite the conformity in results showing that a lack of personal protective equipment has been identified, the effects of a lack of resources appear to differ between studies. Research by Blanco-Donoso et al. (2020) concludes the contrasting result that a lack of resources has no effect on the personal wellbeing of staff. Rather, this research finds that a lack of resources increases dissatisfaction with management. The results are corroborated by research by Hering et al. (2022) stating that a lack of resources positively relates to dissatisfaction with management.

4.3 Social support

The social support dimension in this review is defined as all helpful social interaction available on the job from co-workers and supervisors. Social support is a more complex dimension compared to the two previously discussed dimensions due to its need to be matched to the environment. However, when social support is high it has a mitigating effect on strenuous effects of high job demand and low job control.

During the Covid-19 pandemic, social support is an important factor of quality of work to maintain or improve. In qualitative research by Snyder et al. (2021) it was found that teamwork was an integral part of collective survival through the pandemic.

When looking at social support from co-workers, one finds that this is a complex dimension during the Covid-19 pandemic. Due to mitigation measures in place staff could only work in one certain department and staff was not anymore interchangeable. Rutten et al. (2021) found that there was an improved teamwork within teams. The mitigation measures causing a limitation in the amount of co-workers staff could interact with caused strengthened mutual trust and increased support towards each other. Rutten et al. (2021) found that within a team communication improved, as well as evaluation and giving feedback, with one respondent describing:

“Due to COVID-19, it was even more important to communicate with each other, and this therefore improved. It was kind of mandatory to listen to tips from others; to survive as a team it was necessary to have evaluation moments” (Rutten et al., 2021, p. 5)

The citation above corroborates the findings by Snyder et al. (2021) in describing that teamwork is seen as an important aspect of survival during the Covid-19 pandemic. The findings by Snyder et al. (2021) and Rutten et al. (2021) are further confirmed by qualitative research by Hoedl et al. (2021). In this research it is described that because of a shared sense of urgency, cooperation and communication within teams improved and a good working atmosphere existed within teams. This results in a stronger sense of cohesion within teams. A quantitative study performed by Blanco-Donoso et al. (2020) also report moderately high levels of social support, stating that staff helped each other through difficult times during the Covid-19 pandemic.

The stern division of staff in departments, however, did cause a decreased level of collaboration between teams. With one respondent in the study by Rutten et al. (2021) describing:

“The pressure at work got higher and I felt like a fully packed mule the past weeks. We got more and more tasks and received no help from other colleagues of other wards” (Rutten et al., 2021, p. 6)

Even though the collaboration between teams was prohibited due to mitigation measures in place, teams with a higher workload describe feeling abandoned by other teams.

When examining social support between staff and supervisors one finds conflicting accounts about the situation in nursing homes during the Covid-19 pandemic. Research by Rutten et al. (2021) finds that, similar to their findings in task information, a lack of social support was experienced from leaders during the pandemic. Absence of managerial staff caused feelings of abandonment. The main reason for this was that the managerial staff was the reason that strenuous mitigation measures were put in place. Findings talking about team leaders, however, compared to results found within teams.

While Rutten et al. (2021) describes a situation in which managerial staff were experienced as offering low social support, this contrasts with the findings by Hoedl et al. (2021). This research found that supervising staff were concerned about serious issues and regularly praised the staff. One respondent in the research by Hoedl et al. (2021) described:

“And then we received the feedback: Thank you for the work that you do. We need to keep sticking together” (Hoedl et al., 2021, p. 7)

And a different respondent describing:

“In the meantime, the nursing home’s manager came to the handover and praised us for our performance” (Hoedl et al., 2021, p. 6)

The citations above highlight the importance of social support by managerial staff during a crisis. The research further describes several ways that social support is increased in nursing homes. Stating that staff felt greater social support when allowed to take home disinfectant for private use and having a designated staff member available to be contacted when questions about mitigation measures arose.

The positive influence of social support by managerial staff is highlighted in the quantitative research by Blanco-Donoso et al. (2021) describing that social support is seen as essential under the circumstances of the Covid-19 pandemic. Stating that increased social support by managerial staff through providing resources, support and recognition will increase staff's ability in dealing with difficult situations.

Overall, quantitative research by Prados et al. (2020) found that increased perceived social support is a predictor for both personal accomplishment and emotional exhaustion. Meaning this has a directly linked mitigating effect on negative consequences of high workload. Furthermore, research by Van Dijk et al. (2022) to the impact of job demands has concluded that providing the right social support helps staff avoid continuous negative thoughts and improve the way staff responds to distress. The latter of which is also confirmed by Prados et al. (2020) and Blanco-Donoso et al. (2020).

5. Discussion and conclusion

This chapter will firstly interpret the results as they were extensively set out in the previous chapter. The goal for interpreting these results is to draw a conclusion and answer the research question. Following the interpretations of the results this chapter will outline both the theoretical implications this research has, and the practical implications. The practical implications will include practical recommendations for nursing home management. Furthermore, this chapter recommendations for further research will be given. Lastly, this chapter will outline the limitations of this research.

5.1 Interpretation of results

In this section the results presented in the previous chapter will be discussed. First, the individual dimensions of quality of work will be discussed, namely: Job Demand, Job Control and Social Support. When the individual dimensions are outlined, further elaboration will be given to address the interaction between these three variables to outline a as comprehensive as possible description of the quality of work in nursing homes during the Covid-19 pandemic.

5.1.1 Job Demands

The previous chapter has discussed the dimensions of job demands in three subdimensions, namely workload, unexpected tasks and other causes of stress.

Firstly, the results show that the workload for staff in nursing homes has increased significantly. The reasons for the increase in workload for staff in nursing homes is twofold. The first reason for an increase in workload are the staff shortages that are caused by the Covid-19 pandemic and the measures that are in place to prevent the spread of illness caused by Covid-19. The specific measures that cause a shortage in staff are the self-isolation measures. When staff have (possibly) infected with Covid-19 they are not allowed to come into work, thus decreasing the workforce and with that increasing the workload for colleagues. The second reason for the higher workload for nursing home staff are the longer working hours and lack of breaks. Staff working in nursing homes describe that time off work is limited and not enough to get an appropriate amount of rest and regenerate. Some research describes extreme accounts in which personnel are not allowed to take breaks or even have to reside at the nursing home. The reason for the increase in working hours and lack of breaks

are the measures that the nursing home or the (local) government have put in place to avoid further spread of Covid-19.

Secondly, the studies used in this review describe multiple situations in which unexpected additional tasks are added to the daily routines of nursing home staff. Additional tasks can for example be concerning new hygiene measures and require extra steps in using personal protective equipment. The guidelines concerning hygiene and personal protective equipment are rapidly changing, putting extra job demands towards the staff. This also includes additional tasks concerning the implementation, organisation, monitoring and reinforcement of social distancing requirements for both the staff and the residents. This is described as a difficult task. The reason for this is that residents are not always understanding or willing to follow requirements. Furthermore, the requirements are not in line with the view staff has of what they need to offer residents the best care possible. In line with this is also the communication of mitigation measures and requirements towards family members of the residents. Other additional tasks include dealing with possible changes in the behaviour of residents and facilitating contact between residents and their family.

Thirdly, other causes of psychological stress for nursing staff can be found in mental strain caused by Covid-19 directly. This includes direct illness and fear of contracting or infecting others with Covid-19. However, very little research shows that this is one of the main reasons for an increase in job demands for nursing home staff.

Overall, this review has found an increase in job demands for nursing home staff during the Covid-19 pandemic. The main reason for the increase in job demands is not a direct consequence of Covid-19 but rather an indirect one. The increase in job demands are a result of the in-place self-isolation and mitigation measures within the nursing home.

5.1.2 Job Control

In the previous chapter this review discussed the dimension of job control through four sub-dimensions. These sub-dimensions are decision authority, intellectual discretion, task information and availability of resources.

A sub-dimension that has caused a decrease of job control for nursing home staff during the Covid-19 pandemic is decreased decision authority. The mitigation measures that have been put in place during the pandemic have caused great changes in how nursing home staff are

allowed to do their job. The mitigation measures are strict rules that need to be followed so there is very little ability for the nursing home staff to autonomously decide how their job or even separate tasks are performed. Furthermore, nursing home staff found that they have little influence in the mitigation measures and how these measures are implemented.

This review found that job control concerning intellectual discretion has decreased during the Covid-19 pandemic. However, this review did find that the application of personal knowledge within the job of nursing staff helps maintain quality of care during a difficult situation such as the Covid-19 pandemic.

An important sub-dimension which this review has found to strongly influence job control is task information. Distribution of information during the Covid-19 pandemic is important because, as previously discussed, additional unexpected tasks arise frequently. When nursing staff do not receive clear enough information concerning new tasks this leads to feelings of insecurity and uncertainty with the nursing staff and therefore decreases their feeling of job control. When given clear information this means nursing staff is able to perform new tasks well, avoid uncertainty and better handle unexpected situations. The main differences this review found in clear information and unclear information concerns the sources of the information and the means of communication.

A sub-dimension of job control that was touched upon often in the used studies is a lack of resources available for the nursing home staff. This mainly concerns personal protective equipment. Lack of availability of resources performing tasks becomes hindered and therefore decreases job control. Furthermore, lack of availability of resources causes nursing home staff to negatively reflect on management decisions, increasing a sense of seclusion in decision making.

Overall, due to the mitigation measures and additional tasks that are put in place, job control in the organisation is under stress. However, job control can be maintained as much as possible through clear communication concerning the measures and additional tasks and offering sufficient and tailored task information.

5.1.3 Social support

The previous chapter discussed two ways the dimension of social support occurs within a nursing home context. Namely social support between co-workers and social support between staff and management.

Within the studies examined by this review there was a consensus of an increased social support between co-workers within the same team. Because of mitigation measures teams are smaller and there were less personnel changes between teams. This caused mutual trust, communication, giving feedback and overall support increased within teams. However, due to the mitigation measures communication, understanding and support between teams worsened.

This review found that the experienced social support by staff from management was variable. Within some studies a lack of social support was experienced because of the absence of managerial staff and limited communication. This caused feelings of abandonment with the nursing homes staff. Experienced social support from management is also closely linked with availability of resources. The reason for this is that a lack of available resources causes staff to negatively reflect towards the experienced social support from management. Different studies however found that staff were satisfied with the way managerial staff showed appreciation for the employees and attention towards the personal wellbeing of employees. Increased social support mitigates the effects of low job control and high job demands and increases the nursing home's staff ability to deal with difficult situations. Experienced social support from management is also closely linked with availability of resources. The reason for this is that a decrease in resource availability

5.2 Conclusion

In the introduction of this review the research question posed was:

“What was the influence of the Covid-19 pandemic on the quality of work of nursing home workers?”

The interpreted results above give us an answer to this question. As one may find the impact of the Covid-19 pandemic on the quality of work of nursing home workers cannot be described unequivocally. This review has found that in every research the job demands have increased because of mitigation measures and self-isolation requirements. Because of the implementation of mitigation measures a decrease in job control is inevitable, however it can

be strongly limited by making sure clear communication and task information is established for the nursing home staff. Furthermore, some nursing home settings have been able to maintain or put in place sufficient social support to mitigate the effect of limited job control and increased job demands.

Table 3

Potential outcomes of Quality of Work

	Job Demands	Job Control	Social Support	Quality of Work
Situation 1	+	-	-	-/-
Situation 2	+	=/-	-	-
Situation 3	+	=/-	+	=/-

The above description implicates that there are three potential outcomes regarding the quality of work during the Covid-19 pandemic experienced by nursing home staff. The first outcome comes from a situation in which job demands have increased, in which job control has decreased and social support is not established. This situation leads to a strongly decreased quality of work. A second outcome is the result from a situation where job demands have increased and through support from the organisation the loss of job control has been limited, however no further social support is established. This results in a situation where quality of work decreases. The third outcome results from a situation in which job demands have increased, the loss of job control has been limited and social support that matches the context has been established. This results in a situation where the quality of work of nursing home staff decreases as little as possible and stays as close to the level preceding the Covid-19 pandemic. The potential outcomes are visualised in table 3.

5.3 Theoretical implications

There are several theoretical implications and contributions this research offers. In the introduction was stated that this research would set out an as complete as possible overview of the effects the Covid-19 pandemic had on the quality of work experienced by nursing home staff. This paper adds to previous literature by creating a more complete view than any previous study was able to achieve, and therefore creating both a nuanced and more generalizable overview of the changes in quality of work the Covid-19 pandemic has caused.

Furthermore this research underlines the usability of the Job-Demands-Control-Support model by Karasek (1979). This research has also confirmed the complexity of social support and, when applied correctly in the context of the situation, its strong effects on the experienced quality of work. The reason for this is a mitigating effect, which in this research is mainly shown to mitigate influence of high job demands.

Recommendations for further research are twofold. Firstly, this research has shown that not the direct consequences of Covid-19 illness but rather the mitigation measures that are put into place have caused a decrease in quality of work. Future research should focus on these measures and determine the effectivity of these measures in limiting the spread of Covid-19, and therefore illness and possibly death; and if this will be sufficient to account for the loss of quality of work. Secondly, this research set out to give a broad and generalizable insight in the consequences of the Covid-19 pandemic. For more specific insights (e.g. limited to a certain country, region, scale of nursing home or type of nursing home) further research is advised.

5.4 Practical implications

The practical implications of this research is mainly in its usefulness for when a crisis situation comparable to the Covid-19 pandemic would occur. This research offers guidance in making policy to maintain the quality of work for nursing home staff during difficult and stressful times. The main advice this research gives to nursing home management would be to create a more staff-centred approach towards a crisis situation, whilst maintaining the safety of residents. An increase in job demands may be unavoidable. However, job control should be maintained as much as possible through involving nursing home staff in the decision making processes dictating the implementation and enforcement of new measures. Job control should also be maintained by offering staff the right guidance and information when additional new tasks would occur in their daily working lives. Furthermore, the organisation should create a suitable social support environment both towards employees and among employees. In this research concerning the Covid-19 pandemic social support can be offered by giving the employees a feeling that management is concerned for their safety as well as showing appreciation for the additional tasks that have occurred.

5.5 Limitations

There are several limitations that this research has. First and foremost, general limitations for systematic reviews include selection bias as well as publication bias. Selection bias by the author could result in limitation in number of articles, or a limitation in quality of articles. Overall it has been shown that research with significant outcomes are preferred by publishers and therefore research showing insignificant outcomes may not get included. Even though the insignificant outcomes may be relevant for the review. This means that the research could possibly be influenced by a publication bias.

Furthermore, this research is written by an individual author. Therefore individually performing the identification, selection and appraisal of articles. The limitation here is that it is possible that relevant literature is included or excluded. However substantiated the inclusion and exclusion decisions are, this could be altered when another individual would perform this review.

Lastly, this review discusses a very recent topic. It is highly likely that there are several articles that would be relevant for this study that have yet to be written, peer-reviewed and published. Therefore this articles, with possibly deviating outcomes cannot be included in this review.

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Appendix A - Queries and Yield: PubMed

Search	Query	Yield
#1	<p>“covid 19”[Title/Abstract] OR “covid-19” [Title/Abstract] OR “*covid 19*”[Title/Abstract] OR “*covid*”[Title/Abstract] OR “coronavirus” [Title/Abstract] OR “novel coronavirus” [Title/Abstract] OR “new coronavirus” [Title/Abstract] OR “coronavirus” [Title/Abstract]</p>	256 940
#2	<p>“nursing home” [Title/Abstract] OR “nursing homes” [Title/Abstract] OR “elderly care” [Title/Abstract] OR “care homes” [Title/Abstract]</p>	38 655
#3	<p>“quality of work” [Title/Abstract] OR “job demands” [Title/Abstract] OR “psychological stressors” [Title/Abstract] OR “source of stress” [Title/Abstract] OR “stress” [Title/Abstract] OR “accomplishment” [Title/Abstract] OR “sense of accomplishment” [Title/Abstract] OR “accomplishment of work” [Title/Abstract] OR “hectic” [Title/Abstract] OR “demand” [Title/Abstract] OR “psychological demand” [Title/Abstract] OR “piece rate work” [Title/Abstract] OR “breaks” [Title/Abstract] OR “free-time” [Title/Abstract] OR “off-time” [Title/Abstract] OR “unexpected tasks” [Title/Abstract] OR “personal conflict” [Title/Abstract] OR “conflict” [Title/Abstract] OR “arguments” [Title/Abstract] OR “anticipation of job loss” [Title/Abstract] OR “job loss” [Title/Abstract] OR “unemployment” [Title/Abstract] OR “job pressure” [Title/Abstract] OR “pressure” [Title/Abstract] OR “perception of stress” [Title/Abstract] OR “task pressure” [Title/Abstract] OR “job control” [Title/Abstract] OR “decision authority” [Title/Abstract] OR “formal control” [Title/Abstract] OR “decision making” [Title/Abstract] OR “decisions” [Title/Abstract] OR “autonomy” [Title/Abstract] OR “scheduling” [Title/Abstract] OR “personal planning” [Title/Abstract] OR “initiative” [Title/Abstract] OR “judgment” [Title/Abstract] OR “work method” [Title/Abstract] OR “opportunity” [Title/Abstract] OR “independence” [Title/Abstract] OR “freedom” [Title/Abstract] OR “contact opportunities” [Title/Abstract] OR “asking for assistance” [Title/Abstract] OR “intellectual discretion” [Title/Abstract] OR “discretion” [Title/Abstract] OR “personal knowledge” [Title/Abstract] OR “knowledge” [Title/Abstract] OR “control” [Title/Abstract] OR “task control” [Title/Abstract] OR “control problems” [Title/Abstract] OR “problems” [Title/Abstract] OR “job goal” [Title/Abstract] OR “information” [Title/Abstract] OR “feedback” [Title/Abstract] OR “availability” [Title/Abstract] OR “availability of material” [Title/Abstract] OR “availability of information” [Title/Abstract] OR “personnel” [Title/Abstract] OR “personnel shortage” [Title/Abstract] OR “operations” [Title/Abstract] OR “processing” [Title/Abstract] OR “treatment” [Title/Abstract] OR “interaction” [Title/Abstract] OR “network” [Title/Abstract] OR “norms” [Title/Abstract] OR “social support” [Title/Abstract] OR “relationship” [Title/Abstract] OR “relationships” [Title/Abstract] OR “relationships with manager” [Title/Abstract] OR “relationship with colleagues” [Title/Abstract] OR “relationship with staff” [Title/Abstract] OR “relationship with nurses” [Title/Abstract] OR “personal welfare” [Title/Abstract] OR “concern” [Title/Abstract] OR “knowing” [Title/Abstract] OR “knowing colleagues” [Title/Abstract] OR “knowing others” [Title/Abstract] OR “peer support” [Title/Abstract] OR “supervisory support” [Title/Abstract] OR “predictability” [Title/Abstract] OR “complexity” [Title/Abstract] OR “repetivity” [Title/Abstract] OR “organizing tasks” [Title/Abstract] OR “variability” [Title/Abstract] OR “emotional” [Title/Abstract] OR “emotional demands” [Title/Abstract] OR “job quality” [Title/Abstract]</p>	12 243 865

#4	#1 AND #2 AND #3	54
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Appendix B - Queries and Yield: Web of Science

Search	Query	Yield
#1	TI=(covid 19 OR covid-19 OR covid OR SARS-CoV-2 OR 2019-nCoV OR novel corona virus OR new coronavirus Or coronavirus) OR AB=(covid 19 OR covid-19 OR covid OR SARS-CoV-2 OR 2019-nCoV OR novel corona virus OR new coronavirus Or coronavirus)	312 074
#2	TI=(nursing home OR nursing homes OR elderly care OR care homes) OR AB=(nursing home OR nursing homes OR elderly care OR care homes)	154 347
#3	TI=(Quality of work OR Job demands OR psychological stressors OR sources of stress OR stress Or accomplishment OR sense of accomplishment OR accomplishment of work OR hectic OR demand OR psychological demand OR piece rate work OR breaks OR free-time OR unexpected tasks OR personal conflict OR conflict OR arguments OR anticipation of job loss OR job loss OR unemployment OR job pressure OR pressure OR perception of stress OR task pressure OR job control OR decision authority OR formal control OR decision making OR making decisions OR decisions OR autonomy OR scheduling OR personal planning OR initiative OR judgment OR work method OR opportunity OR independence OR freedom OR contact opportunities OR asking for assistance OR intellectual discretion OR discretion OR personal knowledge OR knowledge OR control OR task control OR control problems OR problems OR job goal OR information OR feedback OR availability OR availability of material OR availability of information OR personnel OR personnel shortage OR operations OR processing OR treatment OR interaction OR networks OR norms OR social support OR relationship OR relationships OR relationship with manager OR relationship with colleagues OR relationship with staff OR relationship with nurses OR personal welfare OR concern OR knowing OR knowing colleagues OR knowing others OR peer support OR supervisory support OR predictability OR complexity OR repetivity OR organizing tasks OR variability OR emotional OR emotional demands OR job quality) OR AB=(Quality of work OR Job demands OR psychological stressors OR sources of stress OR stress Or accomplishment OR sense of accomplishment OR accomplishment of work OR hectic OR demand OR psychological demand OR piece rate work OR breaks OR free-time OR unexpected tasks OR personal conflict OR conflict OR arguments OR anticipation of job loss OR job loss OR unemployment OR job pressure OR pressure OR perception of stress OR task pressure OR job control OR decision authority OR formal control OR decision making OR making decisions OR decisions OR autonomy OR scheduling OR personal planning OR initiative OR judgment OR work method OR opportunity OR independence OR freedom OR contact opportunities OR asking for assistance OR intellectual discretion OR discretion OR personal knowledge OR knowledge OR control OR task control OR control problems OR problems OR job goal OR information OR feedback OR availability OR availability of material OR availability of information OR personnel OR personnel shortage OR operations OR processing OR treatment OR interaction OR networks OR norms OR social support OR relationship OR relationships OR relationship with manager OR relationship with colleagues OR relationship with staff OR relationship with nurses OR personal welfare OR concern OR knowing OR knowing colleagues OR knowing others OR peer support OR supervisory support OR predictability OR complexity OR repetivity OR organizing tasks OR variability OR emotional OR emotional demands OR job quality)	33 157 149
#4	#1 AND #2 AND #3	3124