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## EFFECTS OF JOB DEMANDS, JOB RESOURCES AND PSYCHOLOGICAL CAPITAL ON WORK ENGAGEMENT AMONG NURSES IN BANGLADESH

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### ABSTRACT

The level of work engagement of nurses has indisputable contributions towards patient's service in the health care sectors. The Job Demands-Resources (JD-R) model predicts that job demands and resources relate to work engagement but has not previously been tested in the specific context of registered nurses of Bangladesh using psychological capital as a mediator. The main objective of this study is to investigate the impacts of job demands, job resources on work engagement of nurses of public hospitals in Bangladesh where psychological capital plays the role of mediator. A comprehensive review will be presented based on the most recently selected literature from an academic journal and relevant online platforms. However, as mentioned in the conceptual analysis, it will contribute to the literature by providing expanded knowledge of the job aspects associated with work engagement of nurses and will confirm the importance of monitoring nurses' work engagement and psychological capital to improve patient satisfaction with nursing care in Bangladesh. Besides, the conceptual configuration of this study will help healthcare managers and policy makers of healthcare services that could serve as an input for planning purposes. Furthermore, the conceptual model may possibly able to assist nurses for practicing their ability with responsibility to handle certain situations with the nursing staff coordinator's supervision.

*Keywords:* Job Demands, Job Resources, Psychological Capital, Work Engagement

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## 1.0 INTRODUCTION

The health sector of most developing countries has suffered a considerable structural and institutional reform. This has been especially affected nurses, who make up the majority of healthcare professionals worldwide (Amor et al., 2020). Therefore, many patients are seen in healthcare facilities for a variety of medical issues and complications. For healthcare results to be realized, nursing care is essential (Brooks & Anderson, 2018).

Work engagement of nurses towards their duties is very essential than doctor's role because of patient care giving (Malek et al., 2020). We can't imagine adequate treatment to address the real needs of patients without their service (Chena & Fellenz, 2020). However, globally, engagement level of nurses ranges between 57-15%, which differs from country to country (Allande et al., 2021). The high disengagement rate of nurses globally leads to a high nursepatient ratio, resulting in increased workload which creates psychological pressure and a lower quality of patient care (Bakker et al., 2018).

According to the report from World Health Organization (WHO, 2020) regarding the document on healthcare retention and registered nurses documented that the average cost for disengagement of registered nurse (RN) for a bedside ranged from \$36,900 to \$57,300, leading to a loss of \$4.9M to \$7.6M for an average hospital in EU countries. This means nursing disengagement costs in European Union hospitals billions of dollars each year. On the other hand, In Bangladesh, a firm loses \$22,200 in revenue for every disengaged nurse due to their reduced productivity. A hospital with 100 nurses would lose \$333, 000 annually as a result of missed productivity and in this way, with 15,000 nurses in a large system, the potential loss soars to \$50 million (Jorder et al., 2020).

According to the Bangladesh Nursing and Midwifery Council (BNMC)'s count, as of 30<sup>th</sup> December (2022), Bangladesh has a total of 77,258 registered nurses and midwives, working in different positions for serving a population of 165 million. Among them, 71% employed in the government sectors and the rest of the nurses are working in the private sector. Kamruzzaman (2020) reported that majority of the people of Bangladesh prefer to go to public hospitals for taking services due to financial considerations.

Therefore, Hussain et. al. (2021) study revealed that 85% nurses are dissatisfied towards their hospitals in Bangladesh. The study also found that majority of the female nurses (almost 89 percent) expressed their feelings of dissatisfaction to the working conditions of the hospital. Joarder (2021) pointed out that there is no defined work policies regarding nurses in Bangladesh and nurses have to work in a risky environment.

Additionally, according to an investigative report conducted by Siddiqui and Khandaker (2019) concerning nursing activities of Bangladesh documented that nurse spend only 5% of their time with patient services directly and they spend with other activities such as paper work, maintaining equipment or unnecessary socialization activities at the rest of their time. In relation with that, the researchers also documented that, nurses of Bangladesh are shown disinterest towards work in a variety of forms such as working in a substandard manner, calling in ill, taking longer to finish basic duties, and failing to go above and beyond when called upon.

Furthermore, Rozario et. al. (2018) pointed that nurse of Bangladesh are overloaded. Although, they have to work eight hours each day generally by rotating shifts but due to shortage of nurses and chronic pressure from patients, they have to work 12 hours a day very often. They are frustrated with the practicing system of work and do not feel psychologically well which impacts their level of engagement (Sayed & Rahman, 2019). As a profession, existing condition of nursing in Bangladesh remains poor with below-average standards (Chowdhury et al., 2021).

In addition, there are other obstacles to nurses working in hospitals, such as lack of support and feedback from supervisor, lack of autonomy, lack of training and learning opportunities, an imbalance between the resources required for tasks and those provided by the hospital may lessen the commitment and engagement level of nurses in Bangladesh (Ahmed, 2019).

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Therefore, a statistical review from the Bangladesh Bureau of Statistics (BBS, 2021) reported that a lot of complaints of patient suffering have been made by several stakeholders like patients, patients' guardians, and even supervisors regarding the quality of hospital services and poor nursing engagement with patients. Consequently, the authorities and supervisors of nurses in the health care sectors of Bangladesh are facing several challenges such as poor healthcare delivery, difficulty to face critical situations in patient management, and at last a large amount of financial loss (Mehdi et al., 2021). So, all these issues may directly or indirectly influence the work engagement of nurses and efficiency of care to the patients. In Bangladesh, there is a very limited study to investigate the relationship between JD-R model and work engagement of nurses in Bangladesh. For instance, qualitative research conducted by Latif and Begum (2011), on the environmental factors towards nurse engagement but the findings were somewhat mixed and outdated. This demands a research gap and this study will investigate for solving the problem identified in the healthcare sectors of Bangladesh.

## 2.0 LITERATURE REVIEW

This section will highlight the review of important studies and concepts relevant to work engagement, Job demands, Job Resources and Psychological Capital.

### 2.1 WORK ENGAGEMENT

Work Engagement has, for the last two decades, been a focal research topic in the literature (Schaufeli & Bakker, 2017; Vander et al., 2016). Most of the researchers and scholars stated that engagement is closely associated with involvement, dedication, passion, excitement, absorption, and energy (Amor et al. 2021).

Therefore, work engagement can be defined as “a positive, fulfilling, work-related mental state exhibited by an individual who is committed to delivering outstanding work and is represented by vigor, dedication, and absorption (Bakker et al., 2018; Kim et al., 2019; Niswatey, 2022; Seada, 2017). Whereas, vigor refers to the capacity for facing challenges at work and consistently put effort into one's task through energy and mental resilience (Schaufeli, 2017). At the same time, Bakker and Demerouti (2018) revealed that when a person is deeply invested in their profession and consequently feels a sense of pride and inspiration, this shows dedication. In fact, dedicated nurses consider their work to be inspirational. Besides, absorption involves being fully focused and engrossed in one's work so that time flies (Wang & Xun, 2021).

However, Kahn (1990) was the first to conceptualize engagement at work. He stated that it has three aspects namely Meaningfulness (a sense of return on investments of one-self in role performance), Safety (the feeling of being able to express and use oneself without worrying about adverse effects on one's reputation, position, or profession) and Availability (presence of the physical, emotional, and intellectual resources required for devoting oneself to job engagements).

Therefore, an organization needs to provide demanding, creative, autonomous, and variety in work to make work more meaningful, establish on threatening, enduring social support to maintain safety, and allocate enough resources to assure availability in order to increase work engagement (Derksen, 2018). Evidently, this finding is supported by different past research (Reina et al., 2017 & Wang et al., 2021). Furthermore, another study revealed that there is a dynamic interaction between the person who is willing to devote personal effort into their work, including their physical, cognitive, emotional, and mental capacities (Maseko & Harris, 2018) and the job role that allows them to express themselves without restraint (Bakker et al., 2018).

Moreover, earlier studies on the significance of engaged workers revealed that they are crucial for talent management since they not only boost organizational effectiveness but also enhance organizational image, representing the organization as being responsible (Kaliannan & Adjovu, 2018; Sarangi & Nayak, 2016). Conversely, employees who are not engaged at work frequently distance themselves from their jobs and their current circumstances (Seada, 2017). For that reason,

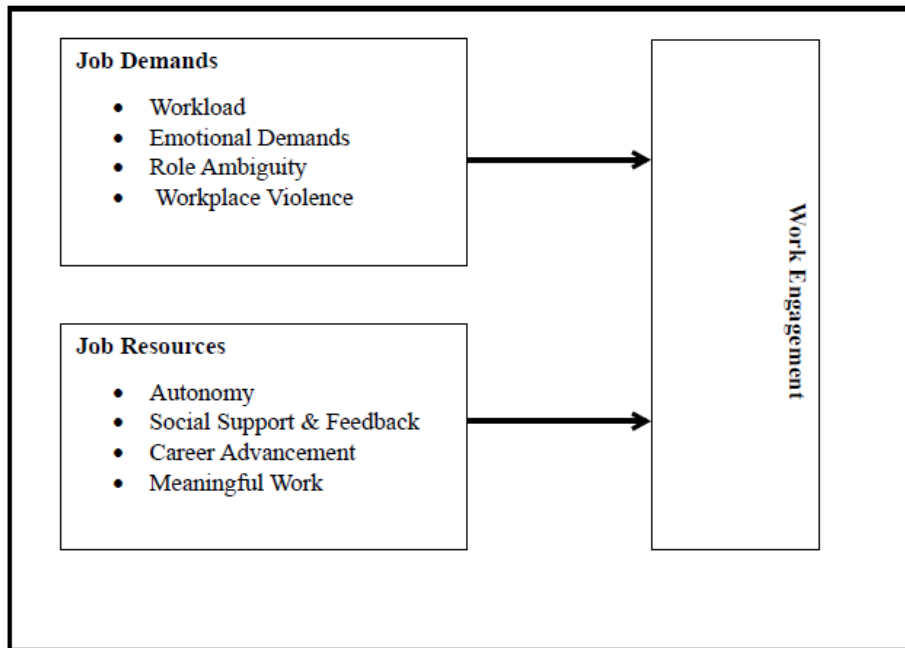
Macauley (2017) arguably claimed that highly engaged workers are less likely to be away from work due to illness or to search for other employment and increased dedication, loyalty, and commitment result from this.

Therefore, in service industries like healthcare, banking sectors, tourism industries and insurance companies emphasized on work engagement of employees because of rendering services smoothly (Ziabia, 2021; Wu & Lee, 2020). Particularly, in case of nursing sector, it is important because they promote and maintain the health of citizens, reducing disability and enabling people to be productive members of society (Patience, 2020). In addition, Dempsey and Reily (2019) emphasized that when nurses value their jobs, patients have favorable experiences and are more likely to recommend the hospital.

Previous studies have shown that understanding the factors that influence work engagement of nurses is crucial for the hospital's authority in order to raise engagement levels (Aiken et al., 2017). For instance, one study conducted in South Africa (Patience, 2020) in the context of registered nurses of public and private hospitals and found that elements of job demands and job resources like workload, emotional demands, aggression, task autonomy, social support, and learning opportunities have impact on work engagement. For examining the distinctive effects of these elements, they relied on the Job Demands-Resources (JD-R) model which is first used by Bakker & Demerouti (2007) followed by (Alruwaili, 2021) in Soudi Arabia; (Fahrizal & Munir, 2022) in Jakarta; (Field, 2021) in Namibia; (Wu & Lee, 2020) in Taiwan and (Wang et al., 2021) in China. The JD-R model included all of the components of workplace variables that might influence work engagement level, and these job variables can be classified as job demands and job resources (Christian et al. 2013).

This review is relied on the empirical model (Figure 2.1) developed by Patience (2020) and it was conducted in Johannesburg, South Africa. Furthermore, the study finding was not applicable all over the world due to some limitations and it was recommended for future study in another cultural contexts. Since, work engagement level of nurses in Bangladesh is very poor (Chowdhury et al., 2021), so it is obvious that more study is required on this area for settling the problem.

Figure 1.1: Theoretical Model



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## 2.2 JOB DEMANDS AND WORK ENGAGEMENT

Job demands are defined as “those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and psychological costs” Ugwu and Onyishi (2020). The concept of job demands was first developed by Karasek (1979) in the Job Demands-Control model. Belatedly, Bakker and Demerouti (2001, 2007) used job demands in their JD-R model several times. The researchers identified three components of job demands such as a quantitative requirement (workload), an emotional requirement, and a mental requirement (aggression at work). These aspects of job demands were supported by other earlier scholars in their research (Nauman et al., 2019; Chikobvu & Harunavamwe, 2022).

Therefore, recent study findings revealed that nurses are still required to work in extremely demanding hospital contexts where they deal with a variety of job demands that affect their performance and degree of engagement like unpredictable work schedules, time constraints from management, caring for too many patients concurrently, and demanding patient interactions (Hochuli et al., 2020). In addition, according to Simone et. al. (2019), increased work demands result in stress, which in turn causes health complications of nurses and reduce level of engagement.

In a meta-analysis of the antecedents, correlates and consequences of job demands to organizations, past study documented that job demands had the strongest correlations with work engagement (Reinhardt et al., 2020). For instance, Santos et. al. (2020) found positive relationship between job demands and work engagement when job demands are perceived as challenging. Additionally, workload and emotional demands have been identified as a common environmental source of stress and those have a favorable impact on work engagement (Othman & Nasurdin, 2019). By agreeing with this, Pastores et. al. (2019) stated that manageable workload and emotional demands are powerful incentive to increase engagement of the workers of the service industry.

On the other hand, another study found that excessive workload task leads to stress and fatigue among nurses (Bakker & Demerouti, 2018). Moreover, unfavourable work attitudes and behaviours that lower the level of work engagement, depersonalization (Sinval et al., 2018) and a lack of personal accomplishment were the most frequently mentioned symptoms of high emotional demands of nurses (Othman & Nasurdin, 2019). Indeed, nurses have to engage in emotional pressures in critical situations namely caring for terminally ill patients, patients in suffering pain, or on the edge of death (Nauman et al., 2019).

Additionally, role conflict and role ambiguity, which are the two most prevalent role stressors in the workplace (Seada, 2017). As the largest group of healthcare professionals, nurses have also been especially impacted by role conflict due to a lack of clarity regarding their duties and responsibilities, task shifting (Seidman & Atun, 2017). On the other hand, role ambiguity can occur from supervisors' insufficient or lacking input regarding nurses' career advancement and learning opportunities (Rovithis et al., 2017). In reality, role conflict and role ambiguity hamper personal development and goal achievement and create unfavourable feelings in nurses, preventing them from being engagement in their work (Bakker & Demerouti, 2018).

Nonetheless, past researchers found that workplace violence or aggression happens more or less in all healthcare settings, some healthcare workers particularly nurses are more vulnerable than others (Santos & Chambel 2020). The study also revealed that the risk is typically greatest in emergency rooms, psychiatric units, admissions offices, and acute care facilities. For instance, the most commonly associated factors in emergency rooms are easy availability to weapons, drug misuse, the spread of gang activity, long wait times in emergency rooms, and inadequate protection (Reinhardt et al., 2020). In addition, another study found that workplace violence that results in feelings of despair and fatigue may decrease the devotion of work engagement (Yu et al., 2019).

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However, researchers also examined the relationship between job demands and work engagement of nurses based on the Job Demands-Resources (JD-R) theory (Bakker et al., 2018; Schaufeli, 2017). According to this theory, all types of job characteristics in any occupations can be supported by using two different variables, namely, job demands and job resources (Bryniak, 2020). Therefore, the JD-R theory is applicable to a diverse range of jobs, regardless of the nature of the job demands or the nature of the job resources (Reina et al., 2017). Moreover, the JD-R theory is the interaction of a dual process namely job demands and job resources that may result in either a decrease or increase in motivation towards work engagement (Radic et al., 2020). Recent evidences on the application of JD-R theory comes from investigations in the context of Belgium (Anthony et al., 2017) and in Portugal (Santos et al., 2020) registered nurses for investigating the relationship with work engagement.

Finally, many researchers proved that job demands were used as the predictors of work engagement and found significant or somewhat insignificant relationship between job demands and work engagement in different countries on many fields around the world such as South Africa (Maphumulo et al., 2019), Canada (Shirom et al., 2019), China (Vander et al., 2016) Saudi Arabia (Alruwaili, 2021) and Pakistan (Ahmed et al., 2016) but in case of Bangladesh, few studies were found regarding the impact of job demands on work engagement of nurses (Ahmed et al., 2018). Consequently, this study will investigate on the relationship between job demands and work engagement in the context of nurses in Bangladesh. The authorities and managers can get proper guidance for establishing rules pertaining to the responsibilities and job duties of nurses.

### 2.3. JOB RESOURCES AND WORK ENGAGEMENT

Job resources refers to those physical, psychological, social, and organizational job conditions that are essential to accomplish work goals, reduce job demands and stimulate personal growth, learning, and development of working individuals (Demerouti et al., 2016). Eventually, job resources is widely used in the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2018) to study the complex relationships between job-related/organizational variables (Dong et al., 2020) and well-being/ill-being outcomes in various work contexts and different countries (Dempsey & Reily, 2018; Lesener et al., 2019).

Therefore, several researchers have previously examined and acknowledged that job resources are the strongest predictor of work engagement (Latif & Begum, 2021; Hammedi et al., 2021). For instance, earlier studies examined on job resources and how they affected work engagement and concluded that autonomy, feedback and support from supervisor, career advancement, and meaningful work were all crucial components of job resources and had a significant impact on work engagement (Ahmed et al., 2016; Urien et al., 2017). However, previous studies have widely argued that job resources to have positive effects on well-being of employees (Barik & Kochar, 2017) and work engagement (Lesener et al., 2019). Additionally, these findings are corroborated by earlier research, which shows that job autonomy, participation in decision-making processes, and continuous feedback all enhance work engagement and wellbeing (Othman & Nasurdin, 2019; Reina et al., 2017; Vander et al., 2016). Moreover, another study found that several job resources components like task autonomy, Career and learning opportunities were favourably related to work engagement (Salmela et al., 2018). On the other hand, another study finding claimed that social support and task variety had no measurable effect on the level of work engagement (Upadyaya et al., 2016).

Conversely, some studies found weak relationship between job resources and work engagement of employees whereas lack of job resources (such as lack of freedom at work or job control) is likely to make it difficult to achieve goals, which can lead to emotions of failure and dissatisfaction (van et al., 2018). Such emotions are therefore likely to result in withdrawal behaviour and unfavourable attitudes toward work, including decreased organisational commitment, motivation, and level of work engagement (Ayob & Nor, 2019; Bakker et al., 2005). Similarly, another study found that job variety and facing challenging task frequently were negatively associated with level of work engagement specially in the mid- and late career stages of a person (Salmela et al., 2018).

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Therefore, since job resources in the healthcare sector have a substantial impact on nurses' work engagement, the nursing profession needs to experience the benefits of work engagement, such as improved service delivery and practicing effectively (Falola et al., 2018; Smith, 2018). Moreover, a recent study on health care nurses demonstrating that presence of sufficient and favourable job resources such as freedom in work, cooperation from supervisors and career opportunities positively affects the level of work engagement (Karatape et al., 2018) and well-being of nurses (Tuan, 2019). Although, nurses experience minimal levels of work engagement who worked long hours with little guidance from managers and supervisors, and have limited work flexibility and autonomy, the past study found that supportive climates may assist nurses handle their demanding jobs and serve as a health protection (Sarangi & Nayak, 2016).

Notably, the JD-R theory is frequently used to support the intricate connections between job-related variables and work engagement or disengagement outcomes in a variety of work environments and across nations (Salmela & Upadyaya, 2018; Simone et al., 2019). According to this theory, having enough job resources within the hospital boosts nurses' motivation to stay involved in their profession and reduces their intention to leave by reducing the impact of job demands (Schaufeli, 2017). This theory was also applied by past researchers in a variety of industries, such as tourism and hospitality (Malinowska et al., 2020) and the health care sector (Radica et al., 2020). These studies also showed that increased job demands weaken employee work engagement and realized a significant impact of job resources, such as job autonomy, social support, performance feedback, and task variety on the level of work engagement (Urien et al., 2017).

Although, past study identified the significant relationship between job resources and work engagement state of all the healthcare professionals across the country, due to cultural constrain the findings can't be applicable in general all over the world and recommended for further study (Malinowska et al., 2020). Additionally, job resources are found to either have a direct effect on work engagement (Bakker et al., 2017) or have no direct effect on work engagement (Othman & Nasurdin, 2019). Considering the above issues, Nicholson (2021) concluded that the relationship between these two is insignificant. So, it is reasonable, to investigate further the relationship between job resources and work engagement of nurses in the context of nurses in Bangladesh.

## 2.4. PSYCHOLOGICAL CAPITAL AND WORK ENGAGEMENT

Psychological capital is a personal resource influential in formulating individual's perspectives of their work environment and their own well-being (Grover et al., 2018). Indeed, this concept of psychological capital was first appeared in the literature and mostly used by Luthans et. al. (2007, 2015, 2018). The researchers argue that the term 'psychological capital' is a composite of four constructs namely Self-efficacy (having confidence), Optimism (making a positive attribution), Hope (a specific end goal to succeed) and Resilience (controlling, tolerating and even moving past to achieve accomplishment).

Therefore, empirical evidences from past studies support the multi-dimensional nature of psychological capital (Youssef & Avioli, 2019) and suggested psychological capital allows individuals to engage in such behaviours that are favourable to positive work-related attitudes and outcomes and engagement can be seen as a manifestation of this process (Aderibigbe & Mjoli, 2018). This line of reasoning is supported by past studies in nursing management around the world not only in Japan (Kim et al., 2019) but also in China ( Xie et al., 2020); in Portugal ( Santos et al., 2020) and in Belgium (Babic et al., 2020) with a high prevalence of work engagement. Since, nursing workforce comprises the largest group of healthcare professionals, they significantly contribute to the quality of treatment, patient safety, and hospital resource management, so, the study of nurse wellbeing is crucial (Ahmadishad et al., 2018).

Previous studies also identified the direct effects of psychological capital on work engagement (Vasandani, 2018) as well as the mediating roles of psychological capital and its components among Korean public service holders (Babic et al., 2020). Furthermore, Luthans et. al. (2018) stated that employees with high levels of personal resources such as strong

personalities, optimism, emotional stability, self-efficacy, and resiliency have higher levels of work engagement because these resources act as mediators against the detrimental impacts of job stress on such engagement.

Similarly, agreeing with them, Ugwu and Onyishi (2020) demonstrated that the positive effects of job demands were found on the level of work engagement where psychological capital mediates this relationship positively. Additionally, Vander et.

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al. (2016) study findings demonstrated that psychological capital served as a partly mediating factor in the relationship between job demands and work engagement of nurses. Likewise, Wang et. al. (2017) study stated that hope and optimism (two constructs of psychological capital) are significantly mediating the relationships between these two variables.

On the other hand, researchers have noted that psychological capital has also play significant impact on the relationship between job resources and work engagement of nurses by increasing or decreasing psychological strengthens or values (Luthans et al., 2018). However, the constructs of psychological capital (self-efficacy, optimism, hope and resilience) together or independently, not only trigger personal wellbeing of nurses and but also works as a mediator to the relationship between the components of job resources like task autonomy, social support, or learning opportunities and work engagement (Bryniak ,2020). For example, high preferences for autonomy (Pan et al.,2017) and presence of other job resources sufficiently have a favourable effect on a nurse's dedication to the job and reduce nurses' disengagement by favourably impacting their coping mechanisms (Grover et al., 2018).

Keeping in mind with importance that the relationship between psychological capital and work engagement tends to be higher in service sectors (Avey et al., 2011; Bakker et al., 2017), particularly to the caring professions like nursing, medicine, and other healthcare workers (Van et al.,2018). In nursing profession, Wang et. al. (2021) examined the relationship between several job resources, including supervisor feedback, meaningful work, and work engagement among Chinese female nurses, they found that psychological capital significantly mediated the relationship. In contrary, Santos et. al. (2020) examined and found that lacking of feedback and support from colleagues increases nurse's level of disengagement due to their feeling of psychological unwell.

Importantly, empirical evidence suggested that when employees feel psychologically well, they inspired to invest energy for achieving their goals. Such conditions of high involvement tend to facilitate the emergence of work engagement (Luthans & Youssef, 2017; Patience, 2020; Yu et al., 2019). In this study, the mediating role of psychological capital on the relationship between two IV's and DV's is supported by JD-R theory.

From the above discussion, it is obvious that psychological capital plays a key role as a mediator in the relationship between job resources and work engagement, but in the context of the health sectors in developing nations like Bangladesh, it is unclear and further research is advised to clarify this issue.

### 3.0 PROPOSED RESEARCH FRAMEWORK

The proposed research framework is shown in figure 2.2 below. The model was developed to examine the impacts of Job Demands. Job Resources on Work Engagement of nurses in Bangladesh in which Psychological Capital works as a mediator. The proposed questionnaires for this study consist of a total of 27 items to measure the impacts of JD-R model on Work Engagement of nurses (7 items), Job Demands (7 items), Job Resources (7 items) and Psychological Capital (6 items). The items of the questionnaire are adopted and adapted from previous studies and all the constructs are validated by past studies. In ensuring validity, the content and face validity will be conducted before the actual field survey.

The simple random sampling technique of probability sampling will be employed since it produces results that are highly generalizable, reliable. In addition, in this study, four public hospitals namely Dhaka Medical College and Hospital, Shaheed Suhrawardy Medical College and hospital, Chittagong Medical College and hospital, Mymensingh Medical

College and hospital are selected for data collection. These hospitals are situated in divisional areas in Bangladesh where almost 50% nurses are employed. As, the registered nurses of public hospitals of Bangladesh are all homogeneous pattern, so they will represent the total registered nurses of public hospitals of Bangladesh. The final analysis to measure the relationship among the variables will be conducted using SmartPLs version 3.3.

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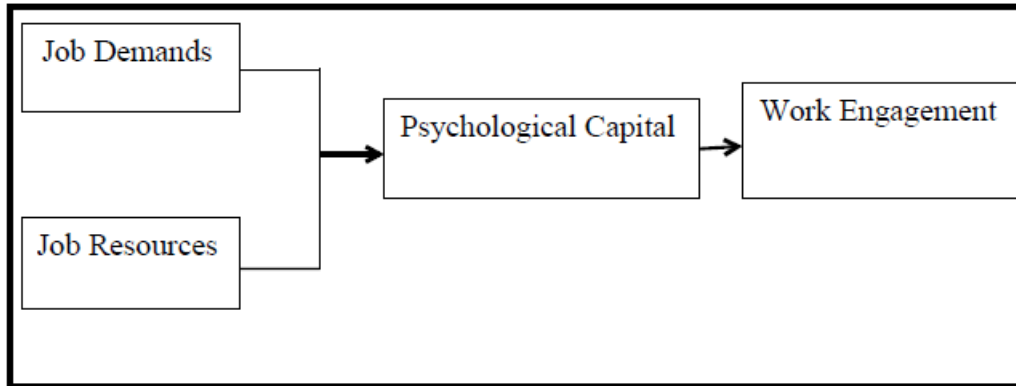
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Figure 3.1: Proposed Research Framework



#### 4.0 FINDING

This paper represents that there exists a relationship between job demands, job resources and work engagement of nurses of the public hospitals of Bangladesh where psychological capital exists. This review provides vital insight on the need to examine further this relationship uniquely in Bangladesh health sector pursuant to problem identified in case of nurses. Undoubtedly, registered nurses are valuable resources in which their level of work engagement can be enhanced by implementing the concept of psychological capital for ensuring patients care and for the attainment of organizational value. Importantly, nurses play significant role in responding to today's new challenges those are facing public hospitals of Bangladesh because of increasing number of patients and diseases day by day.

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