

Do Job Resources have a role in job crafting of hospital staff in Mamuju Regency, at the fourth industrial revolution at Hospital Context: JD-R Theory Perspectives

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**Abstract**—Job crafting (JC) is the most important aspect for hospital staff to deliver quality health services, especially in the 4.0 industrial revolution, as the demand for quality health services is very dynamic. According to the JD-R Perspectives theory, it is influenced by job resources (JR) and labor demand (JD). The study of JC staff at rural area is limited, which may differ in the character of the customer from the urban area. The characteristics of the customer can affect the demand for quality health service influencing the job demand of hospital staff. This study aims to analyse the role of JR in JC behaviour of hospital staff at Rural area, Mamuju at 4.0 era. The population consists of all the staff of 3 (three) hospitals, 614 respectively, and 155 staff selected as sample. The data was analysed using correlation test, spearman test based on non-parametric variables. The result of the test showed that p value was 0,097 more than  $\alpha$  value 0,05. This result shows that JR is not statistically related to the JC of the hospital staff in Mamuju Regency. The conclusion is that the JR can only encourage JC only when the staff have a high JD. This is in line with JD-R Theory perspective that the JC will be stimulated by situational factors, JD and JR at the same time. Staff will have JC when they have JR and JD at the same time. Future research should measure the correlation of the two variable JD and JR with JC.

**Keywords**—job crafting, job resources, job demand, staff, hospital)

## I. INTRODUCTION

The fourth era of the industrial revolution is marked by unpredictable, uncertain,

complicated and ambiguous situations that create a challenge for hospital management. Consumer demand for the quality of service has become more dynamic and operational cost of healthcare services are increasing. Therefore, hospitals are required to be more innovative in creating efficient and effective health services while keeping patients safety in mind. The fierce competitions in the hospital industry also means that hospitals create value in order to achieve a sustainable competitive advantage. The competitive advantage of the organization ensures survival and profitability, which leads to the long-term development of hospitals [1][2]. One of the individual behaviors that help organization in creating innovations and values is job crafting (JC), and it is a behavior that makes jobs more efficient, effective and pleasant. Job crafting behavior can enhance job satisfaction, which later supports the idea of generating innovative ideas from staff [3]. Industrial growths keep on increasing due to the widespread in development of technology and globalization. The complexities of the challenge faced by management make employees performance as one of the most fundamental challenges, which is a phenomenon related to effectiveness, knowledge management, quality, management, financing, and organizational development aspects. Most prominently for healthcare professionals' performance that are closely related to safety [4].

Job crafting (JC) is one of the behaviors that can create value to foster competitive advantage in the organization. In addition, it can also promote work engagement, enhance job satisfaction and overcome work fatigue [5]. Work fatigue can arise because of the high demands that patients place on the quality of services and the work environment, which may

not be conducive. Therefore, the hospital staff must have creative ways to deal with the condition. Several studies have been carried out on job crafting, such as the role of staff in dealing with changes in organizations [6], how job crafting should be managed and how to stimulate its emergence in an organizations [7]. It also plays a role in improving individuals' performance in the organization [8][9].

From the theoretical perspective of Job Demand-Job Resources (JD-R), Job crafting (JC) is influenced by Job demand (JD) and Job Resources (JR). The demand for jobs in the hospitals services is largely influenced by the characteristics of the consumer. The higher the patient's demands, the higher the job demands for hospital staffs. The job demand tends to cause staff fatigue when the staff can not meet the requirement or the working environment is unlikely to support the staff. In contrast, job resources are a condition that can affect motivation when staff are given autonomy, opportunities for development and performance feedback from superiors, which result to a positive impact in reducing job demands (JD) such as increased job satisfaction and engagement [10][11][7].

Theoretically, the JD-R model that has received little attention in researches, is JR. According to the research conducted by Tims and Bakker's [12] in 2013, shows that the structural increase in job resources has a correlation with the level of satisfaction and decreased fatigue. Therefore, specifically, the level of JR plays a mediating role in this correlation. In the employment bond, the effect of increasing structural work resources is fully mediated by the JR rate. This correlation makes employees consciously willing to participate in efforts to improve JR, both structurally and socially. Therefore, the arrangement of employees' work is classified as effective because it is able to produce a higher JR rate over time.

Several studies have shown that JR is positively related and that it is better at predicting work attachment than JD. JR can play a role an intrinsic motivation in enhancing the learning process and self-development. As an extrinsic motivation, JR plays a role in promoting target performance [13][14]. JR is considered as an impact as a buffer at the JD level, including pressure that has the potential to

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cause work fatigue. The JD-R model that plays a role in the organization depends on the characteristics of the prevailing job [15].

The number of studies on the JD-R model shows an upward trend, and the model has become a theory. However, the study of JR and JC staff in hospitals is relatively limited, especially in regional hospitals compared to urban hospitals with different characteristics of customer. The state of RJ in the hospital has unique characteristics, as the autonomy factor as one of the influencing factors on RJ in the hospital, which cannot be fully achieved, because most of the jobs in the hospital have standard operational procedures, therefore professional autonomy tends to be neglected. Some studies explain that Nurses' autonomy is influential in creating meaningful jobs [16]. Compared to other units, nurses form a professional group that has a great autonomy in carrying out their work with doctors [17]. Doctors have dominance power and power in social life [18]. Therefore, this study aims to examine the role of JR's in relation to hospital staffs in Mamuju Regency JC in the era of the fourth hospital industry.

## II. JOB CRAFTING: CONCEPTUAL

One of the staff behaviors that can help increase an organization's competitive advantage is innovative behavior, which will emerge when the staffs have high involvement in working [19]. This innovative behavior is reflected in the behavior of the staffs', which enable a more efficient and enjoyable work, and enabling the work to be more meaningful. Individual characteristics play a role in the emergence of job crafting, there is a sense of confidence in the ability to create at work, which greatly affects the individual's ability to be creative [20][21].

JC is a form of proactive working behavior in which employees can actively change the ways, models, and techniques of work that can influence perceptions [10]. It also make changes to maintain a balance between employee expectations and wants regardless of working environment and resources. In addition, JC is a very important process for promoting engagement and job satisfaction in a workforce that has increased job dissatisfaction and fatigue later in life [5].

The JC concept explicitly focuses on transforming the work of employees by starting and applying aspects of the work. At work, employees independently adjust the work to enhance the unique knowledge they possess. It is matched between the characteristics of the job, the needs, skills and preferences of the workers themselves in relation to the work and themselves in designing the work to create more meaning [5].

To improve organizational sustainability, employees can introduce three types of changes in the working environment. First, think of JC as an organizational means to encourage employees to be more enthusiastic and involved in the work. Employees can organize the job they are responsible for by providing work that is not monotonous and requires new skills. Second, JC can be a valuable tool by aligning the employees' jobs to the needs of other groups of employees. Meanwhile, employees can structure interpersonal relationships while working. Third, JC can be used as a supplement in a job design approach to improve employees' welfare and performance. Employees effectively redesign the way they think about the aspects of the work they do. The job hasn't changed, but employees' view it in a more positive way. Therefore, the three types of changes allow employees to make the jobs more interesting and meaningful [12] [22].

Employees that plays an active role in managing personal work and social relationships will be able to shape personal jobs. The JC involves restricting work, both physically and cognitively. Changes in employees' working boundaries are made by changing the form or number of activities at work, while changes in cognitive form are made by changing the way employees view the work [23]. Changes made by employees are seen as important as they can increase and improve job performance [10].

### III. JOB DEMAND-RESOURCES (JD-R) THEORY

JC involves initiating changes in redesigning operationalized jobs based on characteristics, namely the Job Demand Resources (JD-R) model; JD and JR [14]. JD is defined as a job characteristic that requires continuous effort from employees regarding certain costs. Meanwhile, JR is a job characteristic that contributes to the achievement of goals by Philosophical Readings XIII.4 (2021), pp. 1140-1147. 1142  
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stimulating personal development, which can reduce the effects of job demands and related costs [24]. The JD-R model shows that differences in job characteristics allow researchers to be able to assess the types of changes that occur in employees in arranging the work.

Regardless of the characteristics of the job, stress or work fatigue develops when demands are too high and resources are limited [25]. Previous research in several organizations has shown that high-demanding jobs consume employees' mental and physical resources. This leads to a decrease in labor productivity such as work fatigue and employee health problems. The lack of RJ, which is specifically designed for a particular type of work, can impair motivation and lead to cynicism and performance degradation in additional roles [26].

In the hospital, the employees must have a decent performance to provide maximum service to patients. Employees that are engaged with the work will have very high productivity and are enthusiastically involved when working. This concept shows that one of the factors affecting employees' work engagement is JR [25].

Factors influencing JR relate to information available in the employees' work related to performance feedback [26][27]. Access to employees' job information can be represented through communication about the problems and functions of an organization [28]. Employees' cappacity is influenced by the participation in making decisions on matters that are considered important. Relationships with coworkers refer to the team atmosphere and potential social support that employees can receive from fellow coworkers [10]. Relationships with superiors represent the relationship between employees and superiors with an acceptable social support potential [29]. Remuneration refers to the way employees consider the salary they earn [30]. Independence in work refers to the freedom that individuals have in carrying out the work, including freedom in arranging work schedules, making decisions, and working methods [31].

#### IV. METHOD

##### A. Procedure and Participants

This is a quantitative research with a cross-sectional study approach. The study population consists of all employees of 3 (three) hospitals, exactly 614 employees in Mamuju Regency, West Sulawesi Province, including Mamuju District Hospital, Mamuju Regional Police Hospital, and Mitra Manakarra Mamuju Hospital in 2020. The sampling technique was a proportional random sampling, which amounted to 155 employees being selected as samples. Data were collected using a structured questionnaire.

##### B. Measurement Instruments

The JC and JR measurements were carried out using a 4-point Likert scale from 1 (never) to 4 (always) for JC, while for JR, the scale were from 1 (strongly disagree) to 4 (strongly agree). Respondents that have a high score code were defined as high JC and JR.

Job Crafting was measured using 21 items from the Job Crafting Questionnaire developed by Tims and Bakker [24]. These includes the dimensions of structural work resources (5 items), hampering job demands (5 items), social work resources (5 items), and challenging job demands (5 items). The hypothetical mean and the standard deviation are 50 and 10, respectively. The objective criteria for job crafting are considered to be good when the total score  $\geq$  the hypothetical mean (50). When the total score  $<$  hypothetical mean, then the score was categorized as unfavorable.

Job Resources were measured using 28 items from Questionnaire sur les Ressources et Contraintes Professionnelles (QRCP) developed by Lequerre, Gillet, Ragot and Forquereau [27]. These includes information (4 items), communication (4 items), participation (4 items), relationships with colleagues (4 items), relationships with superiors (4 items), remuneration (4 items), independence at work (4 items) dimensions. The hypothetical means and standard deviation are 70 and 14, respectively. The objective criteria for job support are considered to be good when the total score is  $\geq$  hypothetical mean (70). When the total score  $<$  hypothetical mean, then the score was categorized as unfavorable.

##### C. Data Analysis

Based on the normality of data test verification, a sig. Kolmogorov-Smirnov value of 0.000 was obtained. Because the value of 0.000 is less than  $<0.05$ , it can be concluded that the standard residual value is not normally distributed. Therefore, the analysis method used to test the correlation between JC and JR was non-parametric statistical analysis, the Spearman Correlation Test.

#### V. RESULT

##### A. Descriptive Statistics

The characteristics of the respondents in this study were mostly female (81.9%). The respondents in the age group  $<30$  years are considered to be the highest percentage with 99 people (63.9%). The positions of respondents were mostly staff with 148 people (95.5%). Respondents with D3 (diploma) education were accounted as the highest percentage with 65 people (41.9%). Respondents that are nurses gave the highest percentage with 99 people (63.9%). In addition, the majority of respondents had more than 2 years of working experience, namely 89 people (57.4%) with the most employment status being private contracts with 49 people (31.6%).

Table 1. The frequency distribution shows that most of the hospital staffs have a fairly good JC behavior, namely 134 people (85.8%). Likewise, with the JR level, 149 people (96.1%) had a fairly good JR category.

##### B. Correlation Testings

Based on table 2, the output obtained a correlation coefficient value of 0.134. This means that the level of correlation strength between JC and JR is 0.134, which is very weak (0.00-0.25). The correlation coefficient is positive, therefore the relationship between JC and JR has a unidirectional relationship. The results of the Spearman Correlation Test obtained the Sig value. p value of 0.097. Because the Sig. 0.097 is greater than  $\alpha$  0.05, which means that there is no significant relationship between JC and JR.

TABLE I. DESCRIPTIVE STATISTICS JOB CRAFTING AND JOB RESOURCES (N = 155)

Variable		Descriptive Frequencies	
		n	%
Job Crafting	Low	22	14.2
	High	133	85.8
Job Resources	Low	6	3.9
	High	149	96.1

TABLE II. CORRELATION BETWEEN JOB CRAFTING TO JOB RESOURCES (N = 155)

Variable		Spearman's rho Correlations	
		Job Crafting	Job Demand - Resources
Job Crafting	Correlation Coefficient	1	0.134
	Sig. (2-tailed)	.	0.097
	N	155	155
Job Resources	Correlation Coefficient	0.134	1
	Sig. (2-tailed)	0.97	.
	N	155	155

## VI. DISCUSSION

Based on the results of the correlation test, the sig value of 0.097 indicates that there is no relationship between JR and JC with a correlation coefficient of 0.134, which means that it has a very weak correlation strength and the direction is positive. Positive correlation is the relationship between 2 variables, where an increase in a variable causes an increase in the value of another variable and vice versa, when the value of one variable decreases, the value of other variables will also decrease. JR and JC variables have a unidirectional positive relationship, meaning that the higher the JR level of the hospital staffs, the higher the JC level of the hospital staffs, but the increase

between the two variables is not related. The conclusion is that JR can encourage JC only when the staff have a high JD.

In accordance with the JD-R theory perspective, JC is stimulated simultaneously by situational factors, by JD and JR. The staff will have JC when they have JR and JD at the same time. The JD-R model shows that JD is the most important predictor of employees' work fatigue, while JR is the most important predictor of employee job involvement.

Based on the JD-R model, which indicates that professional resources are motivational in nature [25] [31], it is expected of employees that increase the professional resources to experience higher levels of professional engagement. Job involvement is defined as an active, positive, work-related state characterized by passion, dedication and absorption. A high level of productivity, willingness to do work, and perseverance in the face of adversity characterizes vigor. Dedication implies enthusiasm and feeling challenged by work, which will lead to job satisfaction because it is the most common operationalization of work-related wellbeing [32]. A cross-border study examining the determinants of job satisfaction and job involvement develops from employees' JC [33], which supports the claim that JR can encourage JC at the same time as JD. The study shows that the most important determinant of JC is an attractive job, good relationships with managers and colleagues, and changes in the way the employees interpret the work, from a more positive perspective.

Van Wingerden [34] shows that human resource management initiatives to conduct JC training can have a positive effect on the JC behavior of employees, which has an indirect effect on job requirements, support, and involvement. Gordon [35] also shows that JC training can influence nurse's surgeon's behavior, improvement of JD and JR, and the objective level of job performance. This can be seen in a study conducted by Croon, Van Veldhoven, Peccei and Wood [36] with 15,000 employees at 1,200 workplaces showing that JC in HR practices indirectly influence organizational productivity through employee perceptions of JR (job control) and job satisfaction.

Rosso et al., emphasized that managers should focus on creating resources and a

comfortable environment to promote JC [37]. Today there is also growing awareness of the need for health professionals to take a proactive role in shaping the future work to improve the health system [35]. Future studies should measure the correlation of the two variables JD and JR with JC.

A high level of job resources protects employees from burnout [38][39], because having access to a larger pool of resources enables employees to meet job demands and protect themselves from tension. Burnout is operationalized through two core dimensions: fatigue and cynicism/disengagement [40][41]. Fatigue is defined as work-related fatigue as a result of prolonged exposure to certain job demands. Cynical employees distance themselves from jobs and experience negative attitudes towards the job objects, job content, or work in general [40]. It is expected that employees that put more resources into the job experience lower levels of fatigue because they are more able to accomplish the job assignments. A study by Schaufeli et al. [42] shows that a decrease in labor resources results in an increase in burnout. These results suggest that high levels of employment resources can play a role in preventing burnout.

Constructive feedback not only helps employees to carry out their work more efficiently, but also improves communication between supervisors and employees. When accurate and precise information is provided in a constructive manner, employees and managers can improve or change performance. All employees that are performing well should receive frequent praise and encouragement, whereas those that are not performing at the expected level should be notified of any issues and trained on how to improve. Assessing employees with decent performance helps maintain the motivation and signals to continue in this direction [43]. Communicating positively with employees when they need to improve their performance will help avoid work issues and minimize surprises during performance reviews.

Job resources can also play an extrinsic motivational role, because a working environment that offers many resources fosters the willingness to devote one's effort and the ability to do one's task [27]. In such environment, it is more likely that the task will

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be completed successfully and that work objectives will be achieved. For example, coworkers and supportive performance feedback increases the likelihood of success in achieving one's job goals. In both cases, either through fulfilling basic needs or through achieving work goals, the results are positive and engagement tends to occur [26][41].

In line with the idea of the motivational role of work resources, several studies have shown a positive relationship between job resources and participation. For example, Schaufeli and Bakker [26] find evidence of a positive relationship between three sources of employment (performance feedback, social support, and coaching supervision) and job involvement (enthusiasm, dedication and absorption) among Dutch employees working in an insurance companies and occupational health and safety services, pension fund companies, and a home care institution. More specifically, they use structural equation modeling to show that job resources (not job demands) exclusively predict engagement, and that engagement is a mediator of the relationship between job resources and turnover intentions.

Job resources play an intrinsic motivational role because they promote employees' growth, learning and development, or they play an extrinsic motivational role because they play an important role in achieving working goals. In the previous case, job resources fulfill basic human needs, such as the need for autonomy, connectedness and competence [44][45]. For example, appropriate feedback encourages learning, which enhance job competence, while freedom of choice and social support satisfied the need for autonomy and a need for belonging. The intrinsic motivation of this potential work resource is also recognized by job characteristics theory [43]. Although high JR would not necessarily lead to an increase in employee's JC, according to JD-R theory, there is a situational predictor that causes JR to be able to effect motivation when the job demand is high. The staff will engage in job crafting when JD is high and has JR. For further research, the relationship between JD and JR with JC will be reviewed simultaneously.

## CONCLUSION

The JR can only encourage JC when the staff have high JD. This is in line with the JD-R

theory perspective that JC is stimulated simultaneously by situational factors, by JD and JR. The staff will have JC when they have JR and JD at the same time. The future research should measure the correlation of the variable JD and JR to JC.

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