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Original Research

The Effect of Job Crafting on Employee Well-Being in Brachial Plexus Injury (BPI) Patients

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ABSTRACT

Background: *Brachial Plexus Injury (BPI) is a peripheral nerve injury that can cause functional disorders of the upper limbs due to decreased range of motion of joints and muscle strength. Further impacts can include psychological stress, socioeconomic difficulties, reduced quality of life, and ability to work. Patients who are unable to return to work require job crafting to create a balance between job demands and job resources so that they can achieve employee well-being. The general objective of this study is to determine the effect of job crafting on the level of employee well-being in BPI patients. The benefits of the results of this study will later be used to improve outcome measurement and recommendations in determining therapy goals, especially in the area of productivity, so that independent, productive, and prosperous BPI can be realized.*

Methods: *This research is quantitative research with a pre-experimental research form. The type of approach used is comparative, using a group pre- and post-test design. The research was conducted in the BPI community of East Java using purposive sampling techniques, and 30 research subjects were obtained.*

Results: *The results of the study showed that the majority of research subjects were in the age range of 19-44 years (adults) as much as (80%), male gender (76.7%), and dominated by workers in the private sector (96.7%). The results of the hypothesis test using the paired sample t-test obtained an ρ value of 0.001.*

Conclusion: *job crafting has an effect on employee well-being in BPI patients.*

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INTRODUCTION

Major nerve injuries, such as Brachial Plexus Injury (BPI), are injuries to the peripheral nerve tissue originating from the fifth cervical root to the first thoracic (C5-Th1). This often causes neuro-complex deficits in the innervated upper limbs and affects multiple aspects of life (Khrisna et al., 2021; Quick & Brown, 2020). The impact of apple juice can cause severe physical disabilities (Setiawan & Gessal, 2021).

Based on data from Prof. Dr. Soeharso Surakarta Orthopedic Hospital in January 2019, there were 8 outpatients suffering from brachial plexus injuries, 5 of whom were men aged 20-28 years and 3 women aged 23-26 years. The percentage of causes of BPI injuries is around 90% of motorcyclist accidents (Nugroho, 2017). Khrisna et al. in 2021 reported that the incidence of BPI at Dr. Soetomo Hospital, Surabaya, has increased every year. Most are male (86%) aged 21-30 years (37%). The most common cause of injury is a motorcycle accident (90%), and the right side is the most common side of injury (77%).

Data shows that around 3%-50% of BPI patients are unable to work 1.5 years after injury. BPI conditions have an impact on changes in joint biomechanics that cause pain and physical disability in the arms and hands, thus affecting the functional ability of the upper limbs in carrying out daily activities. Further impacts can include psychological stress, socioeconomic difficulties, decreased quality of life for sufferers, limited participation, and involvement in society, including the ability to work (Park et al., 2017; Quick & Brown, 2020; Setiawan & Gessal, 2021).

Work has an important meaning in achieving life satisfaction. Meaningful work is an important part of a satisfying life (Ryan, 2022). Due to BPI injuries, patients who are unable to return to work require job crafting. According to Bakker & Demerouti (2017), job crafting is a form of adaptation carried out by workers on their initiative to create a balance between job demands and job resources to achieve employee well-being. So the higher a person's job crafting, the higher their employee well-being.

Employee well-being is defined as a personal description that describes happiness, balance between positive emotions and negative emotions, and global evaluation. Employee well-being is the whole aspect of a person's life who works (Wrzesniewski & Dutton, 2001). Employee well-being is a key factor in determining the long-term effectiveness of a job or organization (ILO, 2023).

Based on the research results, Quick & Brown, (2020) stated that the impact of BPI is known to greatly affect psychological well-being and negatively affect the perception of quality of life. This is supported by research by Heinzel et al., (2021) which explained that traumatic nerve injury is more likely to have a strong psychosocial impact compared to compression mononeuropathy. Severe nerve lesions, especially brachial plexus injuries, can interfere with work status, work life, and mental health so that it will affect the patient's well-being. Research Nugraha et al., (2023) explain that job crafting has a significant influence on employee welfare of 46.7%.

Recently, research that highlights the employee well-being aspect of BPI is still rare. Therefore, this research is very important to be conducted to examine the influence of job crafting on BPI on improving employee well-being. This was chosen because there has never been any research related to employee well-being on BPI. Based on the problems above, this research aims to determine the impact of job crafting on employee well-being in Brachial Plexus Injury (BPI) patients.

MATERIALS AND METHOD

This research is quantitative research with a pre-experimental research method. The type of approach used is comparative, using a one-group pre- and post-test design. A sample of 30 subjects was obtained by purposive sampling. The inclusion criteria include BPI patients who are workers, willing to be research subjects indicated by informed consent, and willing to participate in training sessions. At the same time, the

exclusion criteria for this study are acute BPI patients and BPI patients who do not participate in the entire session.

The research flow is to conduct a pretest on BPI patients who meet the criteria using the Employee Well-Being Scale (EWBS) instrument, and then treatment is carried out in the form of job crafting training. After that, a post-test was carried out with an Employee Well-Being Scale (EWBS) examination. The research was conducted in the East Java BPI community. The ethical clearance for this research was issued by the Muhammadiyah University of Surakarta with No. 300/KEPK-FIK/IV/2024.

RESULTS

The East Java BPI Community is one of the largest BPI communities in Indonesia, with members covering the Greater Surabaya, Jombang, and Kediri areas. This community is relatively active and has a structured management structure and routine activities. Routine activities before the Covid-19 pandemic included gathering, sharing, and social services. However, after the Covid-19 pandemic, the provision of activities became less routine. The number of registered members currently reaches around 100 participants.

The research activity began by collecting data on 100 East Java BPI community members. Then a selection was carried out based on the inclusion criteria that had been set, and 30 participants were obtained who met the inclusion criteria and were willing to be research subjects. As many as 70 participants were no longer active, were not willing to be research subjects because they were no longer working, and had difficulty participating in the research intervention session.

This research was conducted by conducting a pretest first on the research subjects and then conducting an intervention in the form of job crafting on BPI patients. The implementation of the intervention for 45 minutes was divided into small groups based on the existing group as a form of implementing job crafting according to the characteristics of the existing work. After the intervention was carried out 6 times, a posttest was conducted on the research subjects. The description of the research data is presented in the data on the characteristics of the research subjects, data normality tests, and hypothesis tests.

Table 1. Characteristics of research subjects

Variable	Classification	Amount	Percentage (%)
Age (years)			
10-18	teenager	3	10
19-44	mature	24	90
Gender			
Man		23	76.7
Woman		7	23.3
Employment sector			
Private sector workers		29	96.7
Government sector workers		3	3.3

The frequency distribution of the ages of the research subjects is mostly in the age range of 19-44 years old, which is included in the adult category, with 24 people (80%), predominantly male, 23 (76.7%). The majority of workers in the private sector were 29

people (96.7%). The results of the comparison of the average values of pre- and post-intervention in this study can be explained in Table 2. Average Values *Employee Well-being Scale* (EWBS) pre-post intervention. There is an increase in the average value of the Employee Well-being Scale (EWBS) score of 9.77. The average post-test value of 67.29 is currently in the category.

Table 2. Mean value *Employee Well-being Scale* (EWBS) pre-post intervention

	n	Min	Max	Mean	Std. dev
Pre-test	30	13.14	96.60	57.52	20.92
Post-test	30	34.50	96.60	67.29	14.63

The prerequisite test is used to determine whether the data is normally distributed or not. The prerequisite test in this study uses the Shapiro-Wilk test because the number of research subjects is less than 50 people. Data is normally distributed if the ρ value is > 0.05. The prerequisite test is presented in the following table.

Table 3. Normality Test of Physical Health Domain

	Value of ρ	Criteria	Information
MWBS pre intervention	0.793	< 0.05	normal
MWBS post intervention	0.283	< 0.05	normal

Based on the data, it was found that the research data was normally distributed. Hypothesis testing in this study was conducted to determine how job crafting affects employee well-being. The hypothesis test used was the paired sample t-test with the test calculation criteria that of the asymptotic significance.sig value (2-tailed) **ρ** < 0.05, then Ho is rejected and Ha is accepted. The following results were obtained based on the results of the hypothesis test.

Table 4. Hypothesis test results

	n	mean±sb	Difference mean±sb	IK 95%	ρ
Pre intervention	30	57.52±20.92	9.77±6.29	15.41-4.13	< 0.001
Post intervention	30	67.29±14.63			

Based on the paired sample t-test, it shows that there is a difference in the mean of the pre-test and post-test results of 9.77. The research hypothesis is accepted; this can be seen from the ρ value obtained of 0.001, which means Ha is accepted. So it can be concluded that job crafting affects increasing employee well-being in BPI patients.

DISCUSSION

The results of the study showed that the majority were in the age range of 19-44 years, which was included in the adult category of as many as 80%, with male gender as many as 76.7%, and dominated by workers in the private sector (96.7%). Setiawan & Gessal, (2021) stated that the highest incidence of BPI was in young adults aged 19-34 years with the male gender at 89%. The majority of BPI patients in this study worked in the private sector, including traders, workers, freight forwarding bureaus, mushroom farmers, and independent entrepreneurs ranging from producing goods such as chili sauce, shrimp paste, food, woodworking, etc. to selling them to the public.

This is in line with data from Hanri et al., in 2022 which explained that the workforce, who are people with disabilities, mostly come from the productive age group (25-59 years), which is 54.25%, compared to the elderly group (60 years and over), which was recorded at 43.32%, and the young age group (15-24 years), as much as 2.43%. When viewed based on the field of work or sector of work, it was noted that the majority of workers with disabilities work in the agriculture, forestry, and fisheries sectors (47.9%), followed by the wholesale and retail trade sector (16.02%) and the processing industry (9.68%). Based on employment status, most have their businesses/work independently (28.09%).

This may be because BPI injury conditions are greatly influenced by a decrease in motor and physical function abilities, which have implications for social conditions such as productivity at work, absence from work, impaired work ability, and daily life activities (Ferreira et al., 2017; Hong et al., 2019).Based on the results of this study, it was found that there was a difference in the average employee well-being in the assessment score where there was an increase in the average value in the post-intervention. This shows that job crafting activities greatly affect employee well-being in general.

This study is in line with the results of research related to well-being and job crafting conducted by Professor Dianne Vella-Brodrick, Dr. Gavin R. Slemp, and Ms. Kelsey, (2013) with 193 Australian workers as subjects, the majority of whom were women. Then the results were that job crafting was proven to increase flourishing and positive affect, and then job crafting was seen to be able to reduce negative affect, which is one of the factors in the level of employee well-being. Job crafting in this study was carried out by giving an active role to the research subjects in their work by making changes both physically and cognitively, which is informal, namely focusing on change.

Through the job crafting process in terms of task crafting, relational crafting, and cognitive crafting, subjects take initiatives based on interests, values, and changes in a positive direction according to the type of job characteristics (Ariyanti et al., 2022; Ramadhan et al., 2023). By doing job crafting, subjects can reform their way of working and rediscover the meaning and purpose of their work life to do new things even though support from the environment is less supportive (Apriyanti et al., 2021). Job crafting is applied to workers to provide direction for their work with their respective needs and life values.

So it is very possible to produce more satisfying work, offer greater opportunities for relationships, and also increase the purpose of life, meaning, and individual values that employees obtain from the daily activities they face at work. In addition, employees who work according to their field also tend to experience increased levels of pleasure and enjoyment from their work, as well as subjective well-being, including employee well-being (Husnayain, 2018). Indirectly, job crafting is one of the factors that can influence the condition of well-being, which is considered a driver of higher levels of productivity and a means to increase worker productivity to achieve employee well-being (Isham et al., 2020; Nugraha et al., 2023).

CONCLUSION

Job crafting is an initiative of change carried out by individuals by changing the characteristics of work according to their interests to develop their skills and abilities. By crafting jobs, workers can develop their potential, cope with stress better, be more productive and creative, have positive relationships with fellow workers, and make

useful contributions to their work so that workers can feel employee well-being at work. This study proves that job crafting has a significant effect on employee well-being in patients with brachial plexus injury.

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REFERENCES

Apriyanti, D. Di, Anindita, R., & Purwandari, D. A. (2021). Peran Job Crafting Terhadap Kinerja Guru Pada Masa Pandemi Covid-19 Melalui Burnout Dan Work Life Balance. *Jurnal Ilmiah Manajemen Dan Bisnis*, *22*(2), 260–278. https://doi.org/10.30596/jimb.v22i2.7917

Ariyanti, R., Hermawati, A., & Suci, R. P. (2022). Analisis Peran Psychological Well-Being Terhadap Kinerja Organisasi Berbasis Leadership Style Dan Job Crafting. *Journal of Innovation Research and Knowledge*, *2*(3), 725–734.

Bakker, A. B., & Demerouti, E. (2017). Job Demands – Resources Theory : Taking Stock and Looking Forward. *Jurnal of Occupational Health Psychology*, *22*(3), 273–285.

Ferreira, S. R., Martins, R. S., & Siqueira, M. G. (2017). Correlation between motor function recovery and daily living activity outcomes after brachial plexus surgery TT - Correlação entre a recuperação motora funcional e as atividades de vida diária após cirurgia do plexo braquial. *Arq. Neuropsiquiatr*, *75*(9), 631–634. http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0004-282X2017000900631

Hanri, M., Sholihah, N. K., Penyandang, P., & Negara, P. (2022). *LABOR MARKET*. *2*(September 2021), 1–5. https://lpem.org/wp-content/uploads/2021/10/Labor_Market_Brief-September_2021_v4.pdf#:~:text=Jika dilihat berdasarkan lapangan usaha,pengolahan (9%2C68%25).

Heinzel, J. C., Dadun, L. F., Prahm, C., Winter, N., Bressler, M., Lauer, H., Ritter, J., Daigeler, A., & Kolbenschlag, J. (2021). Beyond the knife—reviewing the interplay of psychosocial factors and peripheral nerve lesions. *Journal of Personalized Medicine*, *11*(11). https://doi.org/10.3390/jpm11111200

Hong, T. S., Tian, A., Sachar, R., Ray, W. Z., Brogan, D. M., & Dy, C. J. (2019). Indirect Cost of Traumatic Brachial Plexus Injuries in the United States. *Journal of Bone and Joint Surgery - American Volume*, *101*(16), E80. https://doi.org/10.2106/JBJS.18.00658

Husnayain, A. (2018). Pengaruh job crafting, syukur dan totalitas kerja terhadap kesejahteraan subjektif pada pegawai. *Repository.Uinjkt.Ac.Id*.

http://repository.uinjkt.ac.id/dspace/handle/123456789/44460

ILO. (2023). *Workplace well-being*. ILO. https://www.ilo.org/safework/areasofwork/workplace-health-promotion-and-well-being/WCMS_118396/lang--en/index.htm

Isham, A., Mair, S., & Jackson, T. (2020). *Wellbeing and Productivity: a review of the literature*. *January 2020*, 1–128. https://www.researchgate.net/publication/338899227_Wellbeing_and_productivity_a_review_of_the_literature/link/5e31b252458515072d6e0123/download

Khrisna, F. A., Andriana, R. M., Masduchi, R. H., & Pawana, I. A. (2021). AMRTA-X : GRASP KINEMATIC ANALYSIS DURING MYOELECTRIC PREHENSION ORTHOSIS AND BODY POWERED PREHENSION ORTHOSIS ' S USAGE ON BRACHIAL. *Fol Med Indones*, *57*(1), 27–33. https://doi.org/10.20473/fmi.v57i1.24659

Nugraha, W. S., Sartika, D., & Permana, R. H. (2023). *Pengaruh Job Crafting terhadap Employee Well-Being pada Divisi Digital Marketing*. 359–365.

Nugroho, A. (2017). PENATALAKSANAAN FISIOTERAPI PADA KASUS BRACHIAL PLEXUS INJURY SINISTRA DI RUMAH SAKIT ORTOPEDI PROF.DR. SOEHARSO SURAKARTA [Universitas Muhammadiyah Surakarta]. In *Universitas Muhamadiyah Surakarta*. https://doi.org/10.1017/CBO9781107415324.004

Park, H. R., Lee, G. S., Kim, I. S., & Chang, J.-C. (2017). Brachial Plexus Injury in Adults. *The Nerve*, *3*(1), 1–11. https://doi.org/10.21129/nerve.2017.3.1.1

Quick, T. J., & Brown, H. (2020). Evaluation of functional outcomes after brachial plexus injury. *Journal of Hand Surgery: European Volume*, *45*(1), 28–33. https://doi.org/10.1177/1753193419879645

Ramadhan, A. J., Prakoso, H., & Putera, V. S. (2023). Pengaruh Job Crafting terhadap Work Engagement pada Karyawan PT. X. *Bandung Conference Series: Psychology Science*, *3*(1), 889–896. https://doi.org/10.29313/bcsps.v3i1.5329

Ryan, P. (2022). *Employee Wellbeing Starts at Work*. https://www.gallup.com/workplace/394871/employee-wellbeing-starts-work.aspx

Setiawan, D., & Gessal, J. (2021). Rehabilitasi Medik Pada Pasien Dewasa Dengan Cedera Pleksus Brakialis. *Jurnal Medik Dan Rehabilitasi*, *3*(1), 1–10. https://ejournal.unsrat.ac.id/index.php/jmr/article/view/32926/31089

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, *26*(2), 179–201. https://doi.org/10.5465/AMR.2001.4378011