

Impact of JD-R Model on Psychological Well-Being of Gig Workers

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Abstract. In the digital era, the gig economy has recently emerged as a key theme independent review of current work patterns. There is a variety of jobs in Malaysia's gig economy and the number of gig workers keeps increasing. Gig workers are facing many challenges. However, there is only a little research on psychological wellbeing among gig workers in Malaysia. The Job Demands-Resources (JD-R) model is one of the most widely used frameworks to examine well-being. This paper aims to uncover the gig worker's working conditions by adopting the widely recognized and well-established JD-R theory to examine the psychological well-being of gig workers. The early JD-R model was concerned primarily with work-related factors. However, the current JD-R model integrates personal resource as a determinant of employees' well-being. Psychological capital may help gig workers to reduce stress and enhance well-being. Many gig workers mainly join the gig economy because of the autonomy to decide their workload, working time, and job content. However, gig workers have high time pressure and workload as they only get paid after providing the service. The more order they make, the more earning they get. Furthermore, gig workers are performing on online platforms and feeling isolated from the social environment. Social support from family is important to workers. Hence, this conceptual paper seeks to develop a conceptual model of how job demands, job resources, and personal resources affect gig workers' psychological well-being.

Keywords: Job Demands-Resources Model · Psychological Well-Being (PWB) · Psychological Capital · Gig Worker

1 Introduction

The term "gig" exists in the 1920s when jazz music was very popular in the United States. The jazz musicians have flexible work schedules sans employment benefits. Later, in the 1990s, the gig economy grows rapidly in the digital era [1]. The gig economy is referring to the unstructured and flexible work schedule with the use of online applications to link the gig workers, customers, and employers directly [2]. For instance, Grab, Uber, and Foodpanda are well-known apps in the gig economy.

The 'gig economy' has recently emerged as a significant independent review of current work patterns [3]. The Social Security Organisation (Socso) statistics in Malaysia showed that there are 194,800 individuals under Self-Employment Social Security

Scheme (SESSS) as of September 24 [4]. However, gig workers experience higher depression than employed workers as their income is unstable [5]. The current scenario indicates that the epidemic will influence health and well-being greatly and gig workers encounter greater vulnerability [6]. The number of gig workers in Malaysia grows rapidly and they are facing well-being problem but there is only a little research on psychological wellbeing among gig workers in Malaysia.

1.1 Research Problems

Many gig workers mainly join the gig economy because of the autonomy to decide their workload, working time, and job content [7]. However, gig workers have high time pressure and workload as they only get paid after providing the service [8]. Furthermore, gig workers are performing on online platforms and feeling isolated from the social environment. Social support is important to workers [9] but only a few researchers have studied the gig workers' social support [10]. In addition, psychological capital may help gig workers to reduce stress and enhance well-being [11]. The Job Demands-Resources (JD-R) model is one of the most widely used frameworks to examine wellbeing [12]. This paper aims to uncover the gig worker's working conditions by adopting the widely recognized and well-established JD-R theory to examine the psychological well-being of gig workers. The early JD-R model was concerned primarily with workrelated factors. However, following psychological methods that explain behaviour via the interplay of personal and environmental factors, the current JD-R model integrates personal resource as a determinant of employees' well-being. Personal resources can function as job resources to enhance personal growth and achieve goals [13]. Many empirical studies used self-esteem, optimism, and active coping as personal resources [14]. However, Bakker and Demerouti [15] suggested psychological capital as personal resources. Moreover, previous studies of personal resources in the JD-R theory only measure certain dimensions of psychological capital [16]. This study investigates how psychological capital, as a four-dimensional construct, can predict the psychological well-being of gig workers.

2 Literature Review

2.1 Psychological Well-Being

Psychological well-being (PWB) is one of the key constructs for positive psychology organizational behaviour and human resources [17]. PWB is a complicated subject regarding high levels of positive feeling and life satisfaction. PWB is about life going better; it is the combination of feeling good and performing well [18].

Ryff [19] developed a model of PWB. According to Ryff [19], PWB has six dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Self-acceptance is having positive attitudes towards oneself, accepting all the good and bad aspects of oneself. Positive relations with others refer to a pleasant, trusting, and good relationship with others. Environmental mastery means the capability to adapt or develop a new environment and master it in the environment. Purpose in life means the ability to find life's purpose and future direction and

set a goal for achievement. Personal growth refers to the awareness of self-competence and constantly improving to be better. Autonomy refers to one's ability to uphold his or her belief independently even in a situation where others do not accept it.

2.2 Job Demands-Resources Model

The job demands-resources (JD-R) model is a popular and widely-used model. The JD-R model was first introduced by Demerouti, Bakker, Nachreiner and Schaufeli [20]. The JD-R model predicts how job demands drain individuals via an impairment process that leads in stress and burnout, as well as how job resources boost engagement via a motivational process [21].

2.3 Job Demands-Resources Theory

The JD-R model has been used in thousands of organisations and has sparked hundreds of empirical researches and matured into JD-R theory. Job demands are referring to the social, organizational, physical, psychological aspects of a job that require the worker to put continued psychological and/or physical effort and spend some psychological and/or physiological costs [20]. For example, workload and time pressure are job demands. Job resources are referring to the social, organizational, physical, psychological aspects of a job that (a) help the worker to achieve work goals, (b) diminish job demands and the related psychological and/or physiological costs, or (c) boost learning, personal growth, and development [22]. For example, autonomy and social support are job resources. Job resources are important even without the existence of job demands [23]. Personal resources are aspects of one's self or psychological attributes that are typically additional to resilience and entail the ability to successfully manage and influence one's surroundings [24]. For example, psychological capital is the personal resource in this study.

2.3.1 Workload

The workload is a measure of the overall mental and/or physical effort needed to complete single or multiple assignments at a certain standard of quality [25]. Gig workers are exposed to a huge amount of data and at danger of quantitative overload [26]. They receive a large mass of information in various formats and from various sources, which can lead to cognitive overload. Gig workers have to distinguish and analyse the significance of information, as well as to employ tactics to maximise efficiency.

Besides, the experience of financial insecurity makes gig workers use many platforms at one time, work on multiple jobs at once, and manage multiple sources of information. Sometimes platform workers are unable to stop working because there are unforeseen and unexpected workloads to be performed [27]. Workers who are subjected to information overload feel guilty and anxious about their incapacity to fulfil the needs imposed on them. Although gig workers are free to choose their workload and assignments, the heavy workload can be stressful at times.

2.3.2 Time Pressure

Time pressure, namely "the extent to which employees feel they have insufficient time to finish their work tasks", is a job demand [28]. Time pressure is one of the typically examined work stressors [29]. In a study of teacher well-being by Skaalvik and Skaalvik [30], time pressure is also found as the strongest determinant of well-being. Even though time pressure has a detrimental impact on strain factors, it may become a potential motivator in certain circumstances [31]. However, some research doubts the proposition that time pressure has a motivating effect and argues that time pressure has both motivating and demotivating effects [32]. Until now, these inconsistencies have been justified by changes in the quality of time pressure [33] or by the actual time pressure level [34].

Gig workers have high time pressure as they only get paid after providing the service [8]. The more order they make, the more earning they get. Even though gig workers do not have any superior to keep watch over them, they are forced to work faster and harder by financial burdens.

2.3.3 Autonomy

Job autonomy refers to the extent to which the job allows the worker flexibility, independence, and choice in arranging work and selecting the technique to be employed in performing it out [35]. Autonomy is also identified as a key psychological need in self-determination theory [36] which can reduce the harmful influence of depression on employees' well-being [37].

The autonomy and flexibility in the gig economy attract many people to join it [38]. Previous empirical study also supports this claim. Berger et al. [5] conducted a study on Uber drivers in London and 82% of the respondents declared that autonomy to set their working time was more significant than having paid leave or receiving minimum wage. Similarly, 84% of respondents stated that they did not want to be permanent workers if it required them to give up their existing flexibility. Generally, gig workers have more autonomy than conventional workers, which is a desirable employment attribute for gig workers. Yet, the autonomy that gig workers have may not meet their expectations [11].

2.3.4 Social Support

Social support is regarded as the perceived support and love from family, friends, and acquaintances when facing difficulties and daily occurrences [39]. Gig workers, especially young girls and women, received a lot of criticism and opinion from others. In addition, people like to make a comparison. It was hard to manage the feedback and it had a great impact on self-esteem. While having relaxed and informal working culture, freelancers find it is difficult to differentiate between 'friend' and 'colleague'. They are unable to identify whether they are in a social environment or work environment [40]. These ambiguous relationships make gig workers more frustrated and nervous.

Gig workers are working on digital platforms and are feeling socially alienated. Social support is necessary for employees [9] but few researchers have investigated the social support of gig workers [10]. Social support is found can reduce depression and anxiety levels as well as increase the well-being of cyberbullying victims [41].

2.3.5 Psychological Capital

Psychological capital as per Nel and Kotzé [42] is an outstanding construct formed by four different lower-class constructs. Resilience, optimism, hope, and self-efficacy are the four lower-class constructs in psychological capital. Self-efficacy is being confident to undertake difficult job tasks and being able to contribute the required effort to be successful. Hope is thinking positively and being motivated in achieving targets that are set in advance and taking corrective action when necessary, so that individual will succeed. Resilience is the ability to recover from failure and perform well while facing problems. Optimism is having positive thinking that an individual will get a successful outcome in one day and assessing an individual's opportunities [43].

Psychological capital is discovered as a stress-resistance buffer among entrepreneurs, leading to greater levels of well-being [44]. Persons with more psychological capital may be able to handle pressure better [45]. Kurt and Demirbolat [46] also found that teachers with higher psychological capital experience higher psychological well-being. Hence, increasing the psychological capital of gig workers may get the same beneficial impacts as well.

3 Propositions

3.1 Assessing the Relationship Between Job Demands and Psychological Well-Being

Empirical studies indicate that a work environment with high job demands has a significant impact on employee well-being [47]. People who have high job demands with fewer resources to deal with have poor well-being [23].

Proposition 1: *Job demands* (workload and time pressure) are negatively related to psychological well-being.

3.2 Assessing the Relationship Between Job Resources and Psychological Well-Being

Job resources can protect workers' health by externally and internally motivating them; externally by offering workers a way to accomplish set objectives and reduce work demands, and intrinsically by boosting workers' learning, personal growth, and development, as well as meeting basic psychological needs for autonomy, belongingness, and expertise [48]. Empirical studies also have shown that job resources have a positive impact on psychological well-being [49].

Proposition 2: Job resources (autonomy and social support) are positively related to psychological well-being.

3.3 Assessing the Relationship Between Personal Resources and Psychological Well-Being

Previous studies have shown that personal resources have an impact on psychological well-being [49]. Personal resources such as active coping [50], hardiness [51], and self-esteem [52] have a positive impact on psychological well-being. Avey et al. [53] also found that psychological capital has a positive impact on employee well-being over time.

Proposition 3: Personal resources (psychological capital) are positively related to psychological well-being.

4 Discussion

The study is expected to make a contribution theoretically and practically. Theoretically, this study provides the information of expanding JD-R model by including psychological capital as personal resource. Practically, this study will be useful to Malaysia government, society, employer and employee in understanding the psychological well-being of gig workers.

5 Conclusion

This study has developed a conceptual framework of the predictors of gig workers' psychological well-being. With the expansion of internet platforms, it is clear that the gig economy becomes a new trend. Hence, attention should be paid to the psychological well-being of gig workers.

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References

- 1. Whitehead, G. P. (2019). The history and future of the gig economy. Small Business Trends.
- Mohamed Jaafar, S., & Nik Mat, N. H. (2021). A conceptual analysis of effective gig works system for sustainable employment in challenging times. *Journal of Contemporary Issues in Business and Government*, 27(1), 1427–1440.
- 3. Taylor, M., Marsh, G., Nicole, D., & Broadbent, P. (2017). Good work: The Taylor review of modern working practices.
- 4. Daim, N. (2021, October 27). New law on gig workers in the pipeline; industry players engaged. *New Straits Times*.
- Berger, T., Frey, C. B., Levin, G., & Danda, S. R. (2019). Uber happy? Work and well-being in the 'Gig Economy.' Economic Policy, 34(99), 429–477. https://doi.org/10.1093/epolic/eiz007
- Abdullah, A. H. (15, July 2021). Gig workers need better protection from economic shocks. New Straits Times.
- Roy, G., & Shrivastava, A. K. (2020). Future of gig economy: Opportunities and challenges. IMI Konnect, 9(1), 14–25.
- Christie, N., & Ward, H. (2019). The health and safety risks for people who drive for work in the gig economy. *Journal of Transport & Health*, 13(Nov), 115–127. https://doi.org/10.1016/ j.jth.2019.02.007
- Fisher, S. L., & Cassady, E. A. (2019). Use of relational eHRM tools in gig worker platforms. In HRM 4.0 for human-centered organizations (Vol. 23, pp. 81–97). Emerald Publishing Limited.

- Gleim, M. R., Johnson, C. M., & Lawson, S. J. (2019). Sharers and sellers: A multi-group examination of gig economy workers' perceptions. *Journal of Business Research*, 98, 142– 152. https://doi.org/10.1016/j.jbusres.2019.01.041
- 11. Keith, M. G., Harms, P. D., & Long, A. C. (2020). Worker health and well-being in the gig economy: A proposed framework and research agenda. In *Entrepreneurial and small business stressors, experienced stress, and well-being* (Vol. 18, pp. 1–33). Emerald Publishing Limited.
- 12. Halbesleben, J. R. B., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of Management*, 30(6), 859–879. https://doi.org/10.1016/j.jm.2004.06.004
- 13. Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. In G. Bauer (Ed.), *Bridging occupational, organizational and public health: A transdisciplinary approach* (Vol. 9789400756, pp. 43–68). Springer. https://doi.org/10.1007/978-94-007-5640-3_4
- Lee, Y., & Cho, D. (2019). The effects of job demands, job resources, and personal resources on the psychological well-being of middle-aged workers in the United States: Assessing latent profile differences. *International Journal for Educational and Vocational Guidance*, 20(3), 501–521. https://doi.org/10.1007/s10775-019-09414-2
- 15. Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*(3), 209–223. https://doi.org/10.1108/13620430810870476
- 16. Granziera, H., Collie, R., & Martin, A. (2021). Understanding teacher wellbeing through job demands-resources theory. In *Cultivating teacher resilience* (pp. 229–244). Springer.
- 17. (Brian) Joo, B. K., Park, J. G., & Lim, T. (2016). Structural determinants of psychological well-being for knowledge workers in South Korea. *Personnel Review*, 45(5), 1069–1086. https://doi.org/10.1108/PR-01-2015-0011
- 18. Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied Psychology: Health and Well-Being*, 1(2), 137–164. https://doi.org/10.1111/j.1758-0854.2009.01008.x
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. https://doi.org/10.1037/0022-3514.57.6.1069
- 20. Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512.
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. https://doi. org/10.1037/ocp0000056
- 22. Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, 20(4), 265–269. https://doi.org/10.1177/0963721411414534
- 23. Bakker, A. B., & Demerouti, E. (2014). Job demands-resources theory. *Wellbeing, III*, 1–28. https://doi.org/10.1002/9781118539415.wbwell019
- 24. Adil, A., & Kamal, A. (2020). Authentic leadership and psychological capital in job demandsresources model among Pakistani university teachers. *International Journal of Leadership in Education*, 23(6), 734–754. https://doi.org/10.1080/13603124.2019.1580772
- 25. Stramler, J. H. (1993). The dictionary for human factors/ergonomics (1st ed.). CRC Press.
- 26. Poutanen, S., Kovalainen, A., & Rouvinen, P. (Eds.). (2019). *Digital work and the platform economy: Understanding tasks, skills and capabilities in the new era* (1st ed.). Routledge.
- Jiang, L., Wagner, C., & Nardi, B. (2015). Not just in it for the money: A qualitative investigation of workers' perceived benefits of micro-task crowdsourcing. In 2015 48th Hawaii international conference on system sciences (pp. 773–782). https://doi.org/10.1109/HICSS. 2015.98
- Ohly, S., & Fritz, C. (2010). Work characteristics, challenge appraisal, creativity, and proactive behavior: A multi-level study. *Journal of Organizational Behavior*, 31, 543–565. https://doi. org/10.1002/job.633

- 29. Häusser, J. A., Mojzisch, A., Niesel, M., & Schulz-Hardt, S. (2010). *Ten years on: A review of recent research on the Job Demand-Control (-Support) model and psychological well-being*, 24(1).
- Skaalvik, E. M., & Skaalvik, S. (2018). Job demands and job resources as predictors of teacher motivation and well-being. Social Psychology of Education, 21(5), 1251–1275. https://doi. org/10.1007/s11218-018-9464-8
- Widmer, P. S., Semmer, N. K., Kälin, W., Jacobshagen, N., & Meier, L. L. (2012). The ambivalence of challenge stressors: Time pressure associated with both negative and positive well-being. *Journal of Vocational Behavior*, 80(2), 422–433. https://doi.org/10.1016/j.jvb. 2011.09.006
- 32. Reis, D., Hoppe, A., Arndt, C., & Lischetzke, T. (2017). Time pressure with state vigour and state absorption: Are they non-linearly related? *European Journal of Work and Organizational Psychology*, 26(1), 94–106. https://doi.org/10.1080/1359432X.2016.1224232
- 33. Chong, D. S. F., Van Eerde, W., Chai, K. H., & Rutte, C. G. (2011). A double-edged sword: The effects of challenge and hindrance time pressure on new product development teams. *IEEE Transactions on Engineering Management*, 58(1), 71–86. https://doi.org/10.1109/TEM.2010. 2048914
- 34. Schmitt, A., Ohly, S., & Kleespies, N. (2015). Time pressure promotes work engagement: Test of illegitimate tasks as boundary condition. *Journal of Personnel Psychology, 14*(1), 28–36. https://doi.org/10.1027/1866-5888/a000119
- 35. Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2), 159–170. https://doi.org/10.1037/h0076546
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. https://doi.org/10.1002/jsfa.2740050407
- Li, L. M. W. (2019). Can job autonomy attenuate the effect of depression on employees' well-being? It may depend on culture. *Journal of Mental Health*, 28(2), 181–188. https://doi.org/10.1080/09638237.2018.1466043
- Keith, M. G., Harms, P., & Tay, L. (2019). Mechanical Turk and the gig economy: Exploring differences between gig workers. *Journal of Managerial Psychology*, 34(4), 286–306. https:// doi.org/10.1108/JMP-06-2018-0228
- 39. Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, *38*(5), 300–314. https://doi.org/10.1097/00006842-197609000-00003
- 40. Gross, S.-A., Musgrave, G., & Janciute, L. (2018). Well-being and mental health in the gig economy. University of Westminster Press.
- 41. Hellfeldt, K., & Laura, L. (2019). Cyberbullying and psychological well-being in young adolescence-the potential protective mediation effects of social support.
- 42. Nel, P., & Kotzé, M. (2017). The influence of psychological resources on mineworkers' levels of burnout in a remote and isolated mining town in South Africa. *The Extractive Industries and Society*, 4(4), 885–892. https://doi.org/10.1016/j.exis.2017.10.002
- 43. Norman, S. M., Avey, J. B., Nimnicht, J. L., & Pigeon, N. G. (2010). The interactive effects of psychological capital and organizational identity on employee organizational citizenship and deviance behaviors. *Journal of Leadership & Organizational Studies*, 17(4), 380–391. https://doi.org/10.1177/1548051809353764
- 44. Stephan, U. (2018). Entrepreneurs' mental health and well-being: A review and research Agenda. *The Academy of Management Learning and Education*, 32(3), 290–322. https://doi.org/10.5465/amp.2017.0001
- 45. Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 4(Jan), 339–366. https://doi.org/10.1146/annurev-orgpsych-032516-113324

- Kurt, N., & Demirbolat, A. O. (2018). Investigation of the relationship between psychological capital perception, psychological well-being and job satisfaction of teachers. *Journal of Education and Learning*, 8(1), 87. https://doi.org/10.5539/jel.v8n1p87
- 47. Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43(6), 495–513. https://doi.org/10.1016/j.jsp. 2005.11.001
- 48. Van den Broeck, A., Ferris, D. L., Chang, C. H., & Rosen, C. C. (2016). A review of self-determination theory's basic psychological needs at work. *Journal of Management*, 42(5), 1195–1229. https://doi.org/10.1177/0149206316632058
- 49. Tims, M., Bakker, A. B., & Derks, D. (2013). The impact of job crafting on job demands, job resources, and well-being. *Journal of Occupational Health Psychology*, 18(2), 230–240. https://doi.org/10.1037/a0032141
- 50. Lee, Y. (2019). JD-R model on psychological well-being and the moderating effect of job discrimination in the model: Findings from the MIDUS. *European Journal of Training and Development*, 43(3–4), 232–249. https://doi.org/10.1108/EJTD-07-2018-0059
- Corso-de-Zúñiga, S., Moreno-Jiménez, B., Garrosa, E., Blanco-Donoso, L. M., & Carmona-Cobo, I. (2017). Personal resources and personal vulnerability factors at work: An application of the Job Demands-Resources model among teachers at private schools in Peru. *Current Psychology*, 39(1), 325–336. https://doi.org/10.1007/s12144-017-9766-6
- 52. Lo Presti, A., Törnroos, K., & Pluviano, S. (2018). "Because I am worth it and employable": A cross-cultural study on self-esteem and employability orientation as personal resources for psychological well-being at work. *Current Psychology*, 39(5), 1785–1797. https://doi.org/10.1007/s12144-018-9883-x
- 53. Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health Psychology, 15*(1), 17–28. https://doi.org/10.1037/a0016998

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