

Workers Clustering Based on Their Feeling toward Downward Social Comparison

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Abstract

In a variety of manufacturing enterprises, there are still many tasks such as manual assembly that need to be processed by hand, it is as important as ever to improve workers performance. Motivation is also a powerful energy that drives and excites workers, which results in their maximum performance. In order to improve workers' performance, some factories have applied social comparison theory to prompt workers to compete against each other so as to raise workers' motivation toward assembly tasks. As there is a lack of researches on the effect of social comparison on workers' performance for assembly tasks, we have designed a laboratory experiment of cell production to investigate the effect of social comparison. We have built a structural equation model to clarify the psychological mechanism that the workers' personality traits, mediated by their social comparison orientations, affect their response to the downward social comparison, and consequently have a significant influence on the workers' motivation and performance. It is clear that the development of burnout or stress caused by the downward comparison has a negative impact on the workers' performance.

In this study we give a detailed examination on how did the workers feel toward the downward comparison. We designed a questionnaire, which has eight items and is conducted after the experiment. We carried out a correlation analysis between the workers' feeling and their personality traits as well as social comparison orientations, and then conducted a cluster analysis of the workers based on their feeling toward downward social comparison. We intend to making the following contributions through these investigations:

- (1) As there is a lack of study to consider how did the workers feel toward the downward comparison, this study aims at filling this gap through conducting a questionnaire and providing detailed investigating results to clarify the individual difference in the feeling toward the downward comparison.
- (2) Instead of explaining the psychological mechanism that personality traits affect the social comparison process, and consequently influence individual's motivation and job performance, this study places our emphasis on figuring out how many workers feel uneasy or stressed about the downward social comparison, and how many workers didn't respond to the downward social comparison.
- (3) Although many companies have applied the social comparison theory to motivate the workers for improving their performance, almost all of the companies conduct social comparisons according to the supervisors' experiences or intuitions. This paper intends to provide some key points for practitioners to conduct social comparisons more effectively.

Keywords

Social comparison, comparison orientation, motivation, five factor personality, structural equation model, clustering

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Biographies

Yanwen Dong is a professor in the cluster of science and technology at Fukushima University. He received his bachelor degree in 1982 and a master degree in 1984 from University of Science and Technology Beijing, China. He also received PhD in 1996 from the Osaka Prefecture University, Japan. He worked in University of Science and Technology Beijing as a lecture from 1984 to 1995 and in Faculty of Economics, Fukushima University as an associate professor from 1997 to 2004. His current research interests include cell production system, production scheduling, data mining and management information system.

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