

Perception of Job Characteristics and Age as Determinants of Employee Creativity

Oguegbe Tochukwu Matthew*, Uzoh Bonaventure Chigozie Ph.D, Okafor Benjamin C
Department Of Psychology, Nnamdi Azikiwe University, Awka Anambra State, Nigeria
Email. *toguegbe@yahoo.com, chigozie2002us@yahoo.com

Abstract

The study investigated the perception of job characteristics and age as determinants of employee creativity. The study used 175 participants out of which 101 were males and 74 were females, drawn through a systematic random sampling. The age of the participants range from 20-60 years with a mean age of 32.4 and a standard deviation of 8.87. The study utilized job characteristics scale by Hackman and Oldham 1975 and Creativity Inventory adapted from Zhou and George 2001. The study adopted a 2x2 factorial design and accordingly 2-way ANOVA was used for the statistical analysis. The first hypothesis that stated that there will be a significant difference between workers who have positive perception of job characteristics and those with negative perception of job characteristics on their creativity to work was confirmed at $F(1,171)= 47.582, p<.05$ level of significance. The second hypothesis that stated that there will be a significant difference between workers who are young and old on their creativity to work was confirmed at $F(1,171)= 15.631, p<.05$ level of significance. From the result we can conclude that perception of job characteristics and age has an influence on employee creativity. Findings were discussed and recommendations were made accordingly.

Keywords: Creativity, Job Characteristics and Age

1. INTRODUCTION

Organisations in Nigeria have witnessed great negative turn around in productivity as a result of workers attitude which has led to the termination of key employees due to management's alleged non-identification of workers to the goals of the organisation. Due to the changing business environment with global competition, an organization with less or no human creative capital will tend to loose customer patronage of their goods and services thereby reducing their competitive advantage in the global marketplace (Oldham and Cummings 1996). This invariably affects the economy of that organization negatively thereby leading to retrenchment of workers which will in turn lead to increase in crime rate and other social vices.

Creativity is defined as the production of new and useful ideas concerning products, services, processes and procedures. (Amabile,1996) Human assets are regarded as the primary source of value, growth and sustained competitive advantage (Barney, 1991). Due to the changing business environment with global competition, the emergence of a creative class and increasing importance of human creative capital, organizations shed light on creativity and innovation. Creativity plays major role in shaping customer experiences and relationships (Crosby, Evans and Cowles 1990; Walter 1999). Bitner, Booms, and Tetreault (1990) observed that the capacity of employee to customize ideas to each customer's unique needs determines customer satisfaction. Creative employees are more likely to uncover customer's latent needs, to develop a good rapport with customers and to solve their service problems creatively and effectively, ultimately creating a superior experience (Grewal, Levy, and Kumar 2009) which has become one of the most important sources of sustained competitive advantage. Organizations need to unleash their employee's innate creative potential because employee's creative ideas can be used as building blocks for organizational innovation, change and competitiveness (Amabile, 1988; Woodman, Sawyer and Griffin, 1993).

Substantial research to the best of the researcher's knowledge is yet to be conducted within Nigerian context on the core antecedents of employee creativity. Based on this, the current study is interested in investigating the roles of job characteristic and age as it affects creativity of employees.

Job characteristics

According to business dictionary, job characteristics are those aspects specific to a job, such as knowledge and skills, mental and physical demands and working conditions that can be recognized, defined and assessed. Hackman and Oldham (1975) defined job characteristics using job characteristics model which classifies job characteristics into 7 principles- skill variety, task identity, task significance, autonomy, feedback from the job, feedback from agents and dealing with others. These principles were used to examine jobs with the aim of producing desired employee behaviours

Of these characteristics, autonomy has probably received the most attention in research on creativity (Shalley, Gilson and Blum 2000). Autonomy encompasses personal control over how time is allocated, and determination of how the work is carried out. Empirical evidence is supportive of the positive relationship between autonomy and creativity: autonomy and control over one's job have been found to correlate positively with employee

engagement in creative work behaviours, and contribute to employee work satisfaction (Csikszentmihalyi 1996) Autonomy should not, however, be understood as ‘goal-less’, or lack of direction (Amabile, Hadley and Kramer, 2002). Goals increase attention and effort, and provide clear targets towards which individuals can direct their effort and creativity. For example, a study of 400 project teams found that a clearly stated mission enabled teams to focus on the development of new ideas and subsequently predicted successful innovation (Pinto and Prescott 1988). Similarly, several studies have found that when individuals are explicitly told that creativity is important, they are actually more likely to behave creatively. This suggests that creativity can be encouraged by setting creativity goals or standards for the job, when employees know what is expected of them, they are able to direct their efforts into fulfilling these expectations more efficiently.

Age

According to Encarta dictionary, age is the length of time that somebody has existed, usually expressed in years. Under this study, age has been classified into young and old. Some literatures have been written by scholars on age as it relates to creativity.

New research in psychological growth and development in the second half has led to a new understanding of the capacity for positive change and creative expression in the second half of life (Cohen, 2005). Moreover, psychoanalytic research has found that people are in touch with their inner psychological life when they are older more than at any other point in the life cycle (Maduro, 1974). This awareness can be an asset in a creative and artistic sense by allowing people to draw upon new potential as they age. Aging professional artists living in New York City and Los Angeles report taking more creative risks than they did when they were younger and continue to pursue professional training despite the fact that almost half have experienced age related discrimination in their work (Jeffri, 2011).

Some researchers use the terms fluidity, flexibility, and originality to reflect cognitive processes. For example, Jaquish and Ripple (1984) investigated age-related differences in each of these cognitive creative abilities. Beginning in preadolescence (ages 9–12), each of these abilities increases until middle adulthood (ages 40–60). In another study, Jaquish (1984) found age-related declines in flexibility of thinking and in the number of responses (fluency) in divergent thinking tasks, but determined that there was no difference in the quality of responses (originality). Nonetheless, this literature does not tend to overlap much with the literature on age-related differences in cognitive processes (Salthouse, 2004). Each aspect of the generation phase of creativity, involving retrieval, transformation, and analogical transfer, is associated with age-related declines. There is strong evidence of age-related declines in retrieval (Salthouse, 2004). There are age-related changes in transformation whether it is operationally defined as mental rotation or spatial visualization. With transformation operationally defined as mental rotation, researchers have found that older adults tend to be slower and more error-prone than younger adults (Dollinger, 1995).

Based on these assumptions, the study is set to achieve this objective:

- To examine if perception of job characteristics and age influences creativity of employees.

In achieving this objective, the study will answer the following questions:

- Will workers with positive perception of job characteristics be more creative than those with negative perception of job characteristics?
- Will workers who are young differ from those who are old on their creativity in the workplace?

1.1 HYPOTHESES

The study tested the following alternate hypotheses:

- i. There will be a significant difference between workers who have positive perception of job characteristics and those with negative perception of job characteristics on their creativity to work.
- ii. There will be significant difference between workers who are young and old on their creativity to work.

1.1.1 METHODS

Participants

One hundred and seventy five, (101 males and 74 female) participants (employee) were used in the study. The participants were selected through simple random sampling. The age of the participants ranged from 20-60 years with a mean age of 32.4 and standard deviation of 8.87

Instruments

The study adopted two (2) sets of instruments. The first instrument is job characteristics scale by Hackman and Oldham (1975). Job characteristics scale is a 21- item inventory that assesses employee perceptions of 7 principal job characteristics (skill variety, task identity, task significance, autonomy, feedback from the job, feedback from the agents and dealing with others). The response options for each of these items were based on 7-point scale ranging from very inaccurate to very accurate. Both direct and reverse scoring patterns were used for the scoring of data.

The second instrument is job creativity inventory adapted from Zhou and George (2001). The original job creativity inventory consists of 21 questions about creativity in the job setting. Respondent are supposed to

indicate their level of agreement and disagreement about each of the item using a 5- point scale anchored by 5 (strongly agree), 4 (agree), 3 (undecided), 2 (disagree), 1 (strongly disagree). A direct scoring pattern was used for the scoring of data. The revalidation of the job creativity inventory was done by the authors using Exploratory Factor Analysis (EFA) with all factors loading .40 in the Varimax Rotation Matrix and Eigen value of 1 and above. So, items 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20 and 21 loaded significantly and were subsequently adopted as the scale for measuring creativity of employees for the present study.

Procedure

250 copies of the questionnaire were administered with the help of 2 research assistants. The copies were given to a staff of the organisation who helped in distributing to the other members. The participants were allowed to go home with their questionnaires with the directive to submit it the next day. Of all the 250 copies that were distributed, only 175 were correctly filled and returned.

Design / Statistics

The design of this study is a 2(positive perception and negative perception) × 2(young and old) factorial design while two way analysis of variance (2-way ANOVA) was used as a statistical tool for data analysis

1.1.2 Results

Table 1: Summary table of mean and standard deviation of perception of job characteristics and age on employee creativity.

	Mean	Std. Deviation	N
Job characteristics			
Positive perception	80.9338	7.2543	136
Negative perception	71.1795	7.60496	39
Age			
Older	82.0000	6.75771	67
Younger	76.7500	8.66417	108
Total	78.7600	8.36863	175

The table above indicate that there was a significant mean difference between workers with positive perception of job characteristics and those with negative perception of job characteristics on their creativity at workplace.

The table above equally indicated that there was a significant mean difference between older and younger workers on their creativity to work.

Table 2: Summary table of two- way ANOVA on the perception of job characteristics and age on employee creativity.

Source	Type iii sum of square	df	Mean square	F	Sig.
Job characteristics	2318.239	1	2318.239	47.582	.000
Age	761.547	1	761.547	15.631	.000
Job characteristics * Age	17.650	1	17.650	.362	.548
Error	8331.224	171	48.721		
Total	12185.920	174			

a. R Squared = .316 (Adjusted R Squared = .304)

The table two above indicated that the first hypothesis which state that there will be a significant difference between workers who have positive perception of job characteristics and those with negative perception of job characteristics on their creativity to work was confirmed at $F(1,171) = 47.582$, $P < .05$ level of significance. Therefore we can state that there was a significant difference between workers with positive perception and negative perception of job characteristics on their creativity to work.

Table two above also confirmed the second hypothesis which states that there will be a significant difference between workers who are young and old on their creativity at workplace. Therefore we can state that there was a significant difference between older and younger workers on their creativity to work at $F(1,171) = 15.631$, $P < .05$ level of significance

Table two also indicated that there is no significant interaction between perception of job characteristics and age on employee creativity at $F(1,171) = 0.362$, $P < .05$ level of significant.

1.1.3 Conclusion

This study demonstrates that there will be a significant difference between workers who have positive perception of job characteristics and those with negative perception of job characteristics on their creativity to work. The analytical result indicates that workers with positive perception of job characteristics have greater significant difference on creativity at work than workers with negative perception of job characteristics. The finding is consistence with earlier research (Oldham and Cummings, 1996; Samad, 2006). According to Oldham and Cummings (1996), production of novel and useful recommendations to a formal suggestion program was higher when individuals had greater job characteristics. Samad (2006) also discovered that when an employees perceive their organizations as having greater aspects of job characteristics, the emotion of employees will be more

positive thereby leading to employee creativity.

Notably, the above finding is tested using job characteristics model and Amabile's componential theory. Job characteristics model rests on the premise that job characteristics produces psychological states and this states produces a higher level of internal work motivation, job satisfaction and work effectiveness among workers which leads to employee creativity. Therefore, job characteristics indirectly lead to employee creativity through the psychological state it produces. Componential theory equally rests on the premise that a social environment impacts individual creativity. This study examines job characteristics as key components of a social environment for creativity. Consequently, this study identifies job characteristics as social environment influences on creativity.

Nevertheless, our finding does not correspond to that reported by Baek-Kyoo (2007), as described in the above literature review. We posit that this discrepancy may be attributed to the componential model. This model identified those factors or component that influences creativity and this factors work hand in hand in influencing workers towards being creative. For instance, an extrinsic worker with high job characteristics but not motivated tend to perform below his or her creative capabilities. So we can say that other factors that enhance creativity could have been absence where the research was conducted thereby making it impossible to notice the impact of perceived job characteristics on employee creativity.

The study also demonstrated that there will be a significant difference between workers who are young and old on their creativity to work. The analytical result indicates that older workers have a greater significant difference on creativity at work than younger workers. This finding is in line with the observation of Maduro (1974), Bink and Marsh (2000), etc. Bink and Marsh (2000) stated that older adult may perform as well as or possibly better than younger adults in terms of invention originality, due to their more extensive knowledge base.

1.1.4 Recommendation

For future study, it is recommended that researchers should try to increase the number of participants in order to increase the authenticity of the result.

The realm of this research has focus only on how perception of job characteristics and age influences employee creativity. Future research could pay further attention to demographic variables such as academic qualification etc. and how they interact with other variables to influence creativity.

1.1.5 Limitations

Participants complain of the complex number of questions and also due to lack of incentives, the complex number of questions could have demotivated the participants thereby making them not to take the study serious. Also due to the fact that the job creativity inventory was originally constructed for the supervisors to respond base on the workers creativity but was rephrase for the participant to respond. In this case, there is possibility that participant might try to present themselves in a favourable manner which might not represent their true feelings, thoughts and behaviour thereby biasing the result.

Although this study may pose limitation in terms of generalization, however it enhances our understanding by determining and testing the factors that influence employee creativity. Therefore, is an initiative towards a greater understanding of organizational attitudes and behaviours particularly on employee creativity.

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