

Cognitive Appraising Factors in Perceived Career Development of Factory Workers

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Abstract

Factory workers constitute an unavoidable group in manufacturing organizations. Focusing on their career needs is salient in achieving result-oriented outcomes. Hence, the study that examined cognitive appraising factors of meaning in life, work value orientation, work-based identity to predict career development factors among factory employees in manufacturing industries. The survey involved a sample size of 306 and utilized structured questionnaires for data collections. Three hypotheses were tested and confirmed. All the factors significantly predicted career development ($R = .70$, $R^2 = .48$, $F = 92.06$; $p < .05$). It was concluded that the cognitive appraising factors are important in perception of career development. It implied that many factory workers consider the need for career development as largely based on their cognitive appraising factors. It was recommended that management in manufacturing organizations to consider interventions that incorporate career development factors as growth needs of employees with due consideration of the relevant cognitive appraising factors.

Keywords: Meaning in life, work-value orientation, work-based identity, perceived career development.

Introduction

Manufacturing industry workers constitute a significant group of the workforce in employment. Like other groups, they have needs. Apart from basic needs to earn income for survival and enjoy relationship with others in the workplace, they also have the need for career growth and development. According to Alderfer (1972), growth needs which covers career development is an important level of need that employees have. The perception of opportunity to satisfy the need can motivate the worker to increase productivity. Despite its importance, contemporary manufacturing organizations tend to focus more on technology which has resulted in fluid career path for employees especially those on the factory floor. They are confronted with social threats of lay-offs, job insecurity, restructuring and other experiences that challenge career development. It becomes necessary to investigate the possible roles of factory workers' cognitive appraising factors in their perception of career development.

Career can be seen as a course of successive experiences that add up to a person's work life. In this study, it is seen as a chosen occupational path that is aimed at gaining optimal professional attainment through planned and structured advancement leading to growth opportunities. The constructs cover career aspiration, salience, decision self-efficacy and commitment. They are being examined in relation to some cognitive appraising factors in manufacturing organizations.

One of the four career development dimensions is career aspiration, which has been seen as a positive outcome variable considered in vocational psychology (Flores and O'Brien, 2002; Fisher, et al. 2011). The concept has been recognized as career orientation or career anchor where it explains directions about determination toward career goals.

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It may be influenced by the social context and strongly related to what motivates people to choose or remain in certain career (Baruch, 2004). It represents an individual's orientation toward a desired career goal under favorable conditions (Farmer & Chung, 1995).

Career salience is another career development factor. It entails the extent to which someone deliberates career as a life priority. A person adopts professional path to meet certain needs, but the degree of importance attached to career as a life option varies in the workplace. Savickas (2001) and Greenhaus (1971) identified three coverage areas of the career salience construct. First is the relative priority or importance of work compared to specific sources of life satisfaction. Secondly, it is overall attitude in the route of work, containing value and job focus issues, and finally a concern for career planning and progress.

Another dimension refers to individuals' view of their abilities and capabilities in career choices. It enhances perseverance in challenging career tasks. Hackett and Betz (1981) identified it as self-efficacy in the understanding of career development problems. It helps to determine how much effort people would be willing to spend, and how long they will persevere when confronting career challenges. This is followed by career commitment component of career development that involves the development of personal career goals with strong identification and involvement in those goals (Collarelli and Bishop, 1990). It has become a significant source of occupational relevance and continuity as organizations become flatter and less able to provide secure jobs or careers (Collarelli & Bishop). Blau (1988) described it as one's attitude towards his or her profession or vocation.

In all, career development the dimensions are about an employee's attention to career plans and growth. Therefore, it becomes necessary to consider some salient personal variables that have cognitive basis in perception and appraisals. Often times, people find themselves with cognitive appraisals of life and work. Meaning in life, work value orientation and work-based identity are some of these issues in cognitive evaluation. They do reflect the mindset of an individual's tendencies, and may be relevant in investigating career development perception.

Meaning in life is topical, and ranged from coherence in one's life (Battista and Almond, 1973; Reker and Wong, 1988) to goal directedness or purposefulness (Ryff and Singer, 1998). It seeks to explain the significance of life from an individual's point of view. In logotherapy, Frankl (1965) noted that each person attaches meaning to life based on interpretation of experiences. The meaning attached to life is synonymous with well-being and psychological adjustment, which may be important in perception of career development. Based on the attention it has received in individuals' definition of life and interest, meaning in life may provide a new explanation to dimensions of career development. There is also work value orientation of employees as part of the cognitive appraising factors. Super (1995) defined it as a refinement of personal needs through interaction with one's environment. Work values are beliefs, attitudes, preferences and interests about work.

The contemporary workplace dynamics that confront employees make work-based identity to be considered as well. It is a work-based self concept that reflects in employee's self image and integrates organizational, occupational, and other identities shaping work roles and behaviors (Walsh and Gordon 2008; Martire, et al. 2000). Therefore, it becomes imperative to consider work-based identity with meaning in life and work-based orientation in investigating factory workers' perceived career development as a major need in work settings posited by Alderfer.

Review of Literature

Literature is replete with studies on career development. For instance, Lent, et al (2000) drew from the social cognitive theory of Bandura (1986) and self-efficacy model of Hackett and Betz (1981) to explain the processes that guide career development and career choice using cognitive-person variables. Lent et al. identified environmental, personal, and behavioral variables in the career development process. In a subsequent study, Lent, Hackett, and Brown (2000) adopted the socio-cognitive theory to explain how people develop occupational interests, make occupational choices, and achieve success at work. They found relationship among the three cognitive-person variables of self-efficacy, outcome expectations, and goals. Bandura earlier reported them as key factors that interact to influence behavior. The implication of the socio-cognitive theory is that individual factors can play significant roles in workers' plans. Therefore, it is necessary to consider the potential influence that meaning in life, work value orientation and work-based identity as individual's cognitive appraisal factors would have on career development. They have been widely studied on several issues, but not much on factory workers' career development in non Western societies.

As Cognitive variables, they may offer evidence to expand understanding of factory floor employees' perception of career development in a developing economy where the integration of technology into production is dominating management practices.

O'Brien (2004), investigated career development with some cognitive variables independently. The qualitative study examined changes in career orientation and exploring of contributions of life meaning and role modeling/mentoring to women's career paths. It found life meaning to contribute significantly in predicting career orientation among the female participants. Similarly, Abessolo (2015) on work values and career orientations with communalities and impact on career paths, found correlation between work values and career orientation, which reflects a significant association with career aspiration among the participants. Also, on career anchors, work values and personality traits among Malaysian university students D'Silva and Abdul Hamid (2014) found significant positive correlation with employability orientation. The strongest significant correlation existed between work values and employability orientation, which can be associated with career aspiration. This depicts the importance of work values on career development and employability orientation as stated by Choi et al (2013). This may imply that work value could predict career development among factory workers. A study by Kiyani, et al (2011) reported that career salience was associated with job involvement among university teachers. And job involvement is known to be a component of work-based identity. Similarly, studies that involved Nigerian samples found organizational commitment as associated with career salience among workers (Salami, 2008; Agba, et al, 2010). The various studies have shown that there is a possibility that career development dimensions could be predicted by work-based identity outside the scope of previous studies.

In their study, Shahid, et al (2012) reported that the prominent player in determining career salience was culture. Value orientation in any organization mostly focused on internal system of organization and looking for competitive advantage. It encouraged openness to new thoughts and prepared internal capabilities to adopt new ideas, process, or product successfully. It shows that work value orientation as a cultural factor is important in career aspiration. Hence it can be hypothesized that work value might influence career aspiration specifically, and career development generally.

In examining spirituality and relationships between meaning in life, commitment and motivation, Boshoff, et al (2009) established significant relationship between people's sense of meaning in life and their careers. It showed that people with higher sense of meaning in life view attend to their careers differently. The significant correlation between respondents' scores on meaning and satisfaction with career progress shows that those with a sense of meaning in life view their careers as successful. As a corollary, it may be predicted that meaning in life would play a role in factory workers' perceived career development.

Ismail, et al (2015) examined the inter-linkages of career development, career needs, career satisfaction and career commitment. The study involved a military-oriented educational institution in Malaysia. They found perceived career needs to be a critical mediating variable in the relationship between career program (career planning and career management) and career outcomes (career satisfaction and career commitment) in the organization. As a result, it may lead to greater career satisfaction and career commitment in the organization.

Tabene (2012) examined career commitment, work identity, job demands and resources among secondary school teachers in Soweto. Findings suggested that career commitment moderated the relationship between advancement and work identity relationship. The result also showed that career commitment and work identity were positively correlated for the teachers, and significant correlations were found between job characteristics and work identity. This showed that work-based identity is an important factor in aspects of career development, such as commitment. Thus, it may be possible that work- based identity predict career development dimensions.

Ohizu, et al (2014) investigated self-efficacy, emotional intelligence, achievement motivation and work-value orientation in predicting career commitment of bank workers in a Nigerian sample. They found that work-value orientations significantly correlated with commitment. It may be implied that work value orientation would also play significant influence in career development among factory workers.

Not all the cognitive appraising variables involved in this study have been previously linked directly with career salience. Where they have been examined, factory workers were not the focus. This study seeks to find the link between the variables (meaning in life, work value orientation, work-based identity) and career development dimensions. Taylor and Betz (1983) development of the career dimension filled a gap in the literature and provided an assessment intended to help the development of career interventions (Scott and Ciani, 2008). Since Hackett and Betz's (1981) conceptual article that introduced the self-efficacy construct to career choice, researchers have attempted to examine it in relation to career development. They emphasized the mediational role that self-efficacy plays between prior achievement and career selection, as well as the contribution it makes to the selection of college courses, majors and career alternatives when combined with other motivational variables (Hackett and Betz, 1989; Lent et al., 1991, 1993). However, the studies did not directly report the role of meaning in life on career commitment. Nevertheless, a study of factory workers may show the direct influence on commitment and other factors in career development.

In studying career exploration behavior, Gushue, et al (2006) examined the relationship that exist among career decision-making self efficacy, vocational identity, and career search activities in a sample of African- American high school students. Career decision-making self-efficacy was found to be significantly related to vocational identity and the extent of reported career exploration activities. Those with more self-confidence in making career-related decisions were also likely to have a better defined sense of their interests, abilities, and goals as well as to actively engage in activities related to career exploration. Since vocational identity is related to career exploration, it may be hypothesized that work-based identity would possibly predict career aspiration among factory workers. It may also influence perceived career development generally.

Previous studies have suggested that career commitment is distinguishable from other commitment measures such as job involvement and organizational commitment (Blau, 1989). However, career commitment was found to correlate positively with job involvement and organizational commitment (Goulet and Singh, 2002). This is an indication that work-based identity may be important in perception of career commitment and development. With increased job mobility and changes in individuals' views of career success and work/non-work balance, research on career commitment may help explain employees' career development and their relationships with the organizations. It means that factors such as meaning in life, work value orientation and work-based identity may be significant to increase understanding factory workers' career development. The understanding becomes necessary because career provides a significant source of occupational meaning and continuity despite organizations inability to provide employment security.

Organizational commitment has been widely investigated because employees become committed to the organization before attitudes towards job can meaningfully emerge (Bateman and Strasser, 1984). It has been shown that employees are more committed to an organization when they believe the company is focused on a policy of promotion-from-within (Gaertner and Nollen, 1989). If they believe in the policy, they would feel less uncertainty regarding their career future in the company, thereby becoming more motivated to commit themselves. Therefore, it may not be surprising to find a significant prediction of career development by work value orientation and work-based identity in this study. It implies that work value orientation and work-based identity may influence career aspiration and development.

Boshoff, et al (2009) examined spirituality and relationship with meaning in life, commitment and motivation. They found significant relationship between individuals' sense of meaning in life and their career. It appears those with a sense of meaning in life tend to view their career more positively due to higher levels of intrinsic motivation. The correlations between meaning and career commitment provide evidence for this observation. People with higher scores on meaning in life were also more inclined to pursue substantial positive professional outcomes. Perhaps, as Jones et al (2006) identified life meaning and work-based identity as antecedents of career commitment, similar results may be found in the present study of factory workers.

Sock and Mui (2012) investigated the preferred work values and career commitment of *Generation Y* teachers in Malaysia, as well as the moderating effect of cultural orientation on the work values-career commitment relationship of the teachers. They found that work values explained 17% of the variance in career commitment. In addition, intrinsic work values were correlated to career commitment at $r = 0.36$. Cultural orientation was another factor that significantly influenced the work values and career commitment relationship of the teachers. Shahid, et al (2012) also identified culture as a major determinant of career salience. Culture is a combination of values, beliefs and norms and it is a shared practice by individuals. It is the same focus of work value orientation.

Therefore, this study is motivated to investigate the roles of meaning in life, work-value orientation and work-based identity on the career development factors previously identified in literature. It is aimed at understanding how the cognitive factors can predict career development factors to meet growth needs, which are major concern to employees that face several problems associated with technological innovation in manufacturing.

Hypotheses

The first hypothesis stated that meaning in life, work-value orientation and work-based identity will significantly predict career aspiration.

The second hypothesis stated that meaning in life, work-value orientation and work based identity will significantly predict career decision self-efficacy.

The third hypothesis stated that meaning in life, work-value orientation and work-based identity will significantly predict career development.

Research Methodology

Design

The study was designed as a survey and involved meaning in life, work value orientation and work-based identity to predict perceived career development with its dimensions.

Participants

A sample size of 306 was involved in the study. Participants were largely male employees who are factory workers in the Food and beverage industry. They are all from multicultural manufacturing organizations. The age of participants ranged between 20 and 56 with a mean of 30.9 (SD=6.59). Males were 292 (95.4%) and females 14 (4.6%). It reflects a major diversity concern to scholars about small number of women hired as factory workers by international organizations in many developing countries.

Procedure

The purposive sampling procedure was adopted for data collection. Only employees who work at the factory floor in the organizations were involved. Each employee was approached and informed about the study and requested to voluntarily participate. In the organizations, most of the factory floor employees were males. A total of 320 employees willingly volunteered in the study, but 311 returned their copies. However, 5 of the copies could not be used for analysis because some sections were not completed. The final 306 had all sections completely answered. This represented 96.6% response index. Data collection lasted six weeks. A graduate student coordinated the entire data collection exercise.

Instrument

Questionnaires were used for data collection. Each questionnaire contained the scales to measure each variable in the study. The first section used a 10-item scale developed by Steger and Frazier (2006) to measure *meaning in life*. It measured the presence and search for meaning in life. A cronbach alpha of ($\alpha=0.81$) was reported for the entire scale in this study. An example of the items is "I am looking for something that makes my life feel meaningful". The scoring format ranged from absolutely untrue (1) to absolutely true (5).

The next section measured *work value orientation* of participants. The scale was developed by Wallack *et. al* (2000) with initial reliability coefficient of ($\alpha=0.87$), cronbach alpha of ($\alpha=0.95$) was reported for this study. The response options ranged from 'not important at all (1), not important (2), somewhat important (3), important (4) to very important (5)'. A sample item is "A job with clear and well-defined roles and responsibilities". High score indicates participants' high level of work value orientation, and a low score indicated low level of work value orientation.

The third section assessed *work-based identity*. The scale was initially developed by Roodt, et al (2009). It had a reliability coefficient of ($\alpha=0.85$), and a cronbach alpha of ($\alpha=0.91$) in this study. Likert rating format with responses ranging from strongly agree (5) agree (4) rarely agree (3) disagree (2) to strongly disagree (1) was used. A sample item of the scale is "I regard work as the most important aspect in my life".

The fourth section measured career aspiration with 18-item scale developed by Young et al (2015). A cronbach alpha of ($\alpha=0.94$) was reported for the entire scale. It adopted a 5-point Likert format, from ‘not at all true of me’ to ‘Very true of me’. A sample item is “I want to be the best in my field”. Career salience is adapted of the 11-item scale by Allen and Ortlepp (2002). It had a reliability coefficient of ($\alpha=0.83$), while 0.79 was reported in this study with a 5-point Likert format, from strongly agree (5) to strongly disagree (1). A sample item is “the most important things I do in life involve my career”.

An 18-item scale developed by Buyukgoze-Kavis (2014) with a reliability coefficient of ($\alpha=0.92$) was used to assess level of career decision self-efficacy. It yielded a cronbach alpha of ($\alpha=0.872$) in this study. It adopted a 5-point Likert format; ‘no confidence at all’ (1), very little confidence (2), moderate confidence (3), much confidence (4), and complete confidence (5). Example of the scale item is “how much confidence do you have that you could determine what your ideal job would be?”

A 7-item career commitment scale to predict career commitment for women engineers from Buse (2011) was adapted. With a current cronbach alpha of $\alpha=0.69$, it utilized scoring format of strongly agree (5) to strongly disagree (1). An example of the scale item is “I would go into a different industry if paid the same”.

Results

The first hypothesis stated that meaning in life, work-value orientation and work- based identity will significantly predict career aspiration. It was tested by using hierarchical multiple regression. The results are shown on the table below:

Table 1

Insert table here

As shown above, meaning in life, work-value orientation and work-based identity significantly combined to predict career aspiration ($R = .79, R^2= .64, F = 172.97; p<.05$). They collectively contributed 64% to the variance in career aspiration among employees. The finding showed the independent prediction by meaning in life ($\beta = .19, t = 4.01, p<.05$), work-value orientation ($\beta = .48, t = 9.17, p<.05$), and work-based identity ($\beta = .23, t = 4.90, p<.05$) to career aspiration. Work value orientation ($\beta = .48$) had the highest contribution, while meaning in life ($\beta = .19$) had the lowest influence. The hypothesis was confirmed.

The second hypothesis stated that meaning in life, work-value orientation and work- based identity will significantly predict career decision self-efficacy. It was tested using multiple regression statistics, and the result is presented below:

Table 2

Insert table 2 here

The table showed that the factors significantly predicted career decision self-efficacy ($R = .72, R^2= .53, F = 108.53; p<.05$). Specifically, meaning in life, work-value orientation and work-based identity collectively contributed 53% to the variance in career decision self-efficacy among the employees. Further analysis revealed that meaning in life ($\beta = .25, t = 4.50, p<.05$), work-value orientation ($\beta = .41, t = 6.88, p<.05$), work-based identity ($\beta = .17, t = 3.05, p<.05$) independently predicted career decision self-efficacy significantly. In all, work value orientation had the highest contribution of 41% to the prediction, followed by meaning in life (25%) and work-based identity having the lowest (17%). This confirmed the stated hypothesis as proposed.

The third hypothesis stated that meaning in life, work-based identity, and work-value orientation will significantly predict perceived career development. It was tested with multiple regression and the result is presented below:

Table 3

Inserttable3here

From the table, the appraising factors significantly combined to predict career development factors ($R=.70$, $R^2=.48$, $F= 92.1$; $p<.05$). Collectively, they contributed 48% to the variance in career development among employees. Further analysis showed meaning in life ($\beta = .15$, $t = 2.54$, $p<.05$), work-value orientation ($\beta = .40$, $t = 6.47$, $p<.05$), and work-based identity ($\beta = .24$, $t = 4.22$, $p<.05$) independently predicting career development. Of all the variables, work value orientation had the highest influence (40%) on the career development factors followed by work-based identity (24%) and then meaning in life (15%). The hypothesis was confirmed as predicted.

Discussion and conclusions

Hypothesis one which stated that meaning in life, work-value orientation and work based identity will significantly predict career aspiration among factory workers was confirmed. They combined to contribute 64% to the prediction of career aspiration. The finding is supported by an earlier study by O'Brien (2004) on changes in career Orientation: Exploring the contributions of life meaning and role modeling/mentoring to Women's life/career paths. The significant contribution of 19% by meaning in life to the prediction of career aspiration aligns with O'Brien's findings that also influenced career orientation of females in that study. It shows that meaning in life plays significant role in the career aspiration of employees despite gender and occupational differences. Lent, Hackett, & Brown (2000) adopted the socio-cognitive theory to explain how people develop occupational interests, make occupational choices, and achieve success at work. They found relationship among the three cognitive-person variables of self-efficacy, outcome expectations, and goals. The study aligns with the present finding.

Another support for the confirmed hypothesis is Abessolo (2015) study that found work values to significantly influence career orientation. It showed a link between work values and career orientations which support the 48% contribution by work based value orientation to the prediction of career aspiration among factory workers. It shows work value orientation as significant in career aspiration. Similarly, the Malaysia university's survey (D'Silva and Jamaliah Abdul Hamid (2014) that found the dimensions of career anchors, personality traits, and work values to correlate positively with employability orientation is in line with the present findings. The strongest correlation was between the sub-dimensions of work values and employability orientation. They depict the importance of work values on career development and employability orientation as stated by Choi (2013), which shares a semblance of this study.

The second proposition that the cognitive appraising factors will significantly predict career decision self-efficacy was confirmed. Findings showed that they are important factors in career decision self-efficacy among employees. The dearth of literature to show a direct link of career decision self-efficacy with those considered in this study made it necessary to be investigated independent of other career development dimensions. The confirmation of the hypothesis linked the cognitive appraising variables with career decision self-efficacy. Its consideration and finding are salient. In a previous investigation of self-efficacy beliefs of men with careers in mathematics, science, and technology, Amy Lapin Zeldin (2000) found self-efficacy as a foundational construct to career selection and development. Strong self-efficacy beliefs enabled the men to be persistent and determine what it was that they most wanted to do, rather than struggle with their confidence about becoming and remaining successful in a mathematics-related domain. For women, self efficacy beliefs may have developed from their life experiences, which made them resilient to the many obstacles perceived in academic and career paths. The confirmation of hypothesis two shows that life meaning with work value and identity can help to influence career decision self-efficacy as a component of career development. It shows similar relevance in career concern for factory workers who are usually confronted with some degree of uncertainty due to technological development that automate production-related tasks. In a study of career decision self-efficacy, Gushue, et al in (2006) reported a significant relationship with vocational identity and career search activities among African-American high school students. This is synonymous with work-based identity which was found to predict career decision self-efficacy in this study. It showed that career decision self-efficacy is as revealing among factory workers as it was with students despite the different societies both studies were conducted.

It indicates that as a career development factor, career decision self-efficacy is an important need for people striving for optimal career satisfaction. The confirmation of the third hypothesis as proposed showed that the cognitive appraising factors significantly predicted career development among employees in manufacturing organizations. The factors influenced career development factors when taken as a composite, and independently. This however comes as no surprise due to the previous studies that support the findings. For example, it aligns with Choi (2013) who reported a strong association of work values with career development and employability orientation. Similarly, the Boshoff, Vanwyk, and De klerk (2009) study on meaning in life and its relationship with commitment and motivation established a position similar to the hypothesis. As previously reported, this finding highlights the importance of employees' sense of meaning in life and their careers. It shows that those with sense of meaning in life perceive their career concerns differently and give attention to it.

One of the studies that investigated career development with cognitive variables independently is that by O'Brien (2004). The qualitative study found that life meaning contributed significantly to the prediction of career orientation among the females. Abessolo (2015) report on work values and career orientations with communalities and impact on career paths also support the present findings. They showed strong link between work values career aspiration. In D'Silva and Abdul Hamid (2014) on career anchors, work values and personality traits significantly correlate with employability orientation among students. Sock and Mui (2012) report of work values and career commitment of *Generation Y* teachers in Malaysia, as well as the moderating effect of cultural orientation on the work values-career commitment relationship shows the influence of cognitive appraising factors in supporting the importance of workforce culture on career development. Our study aligns with earlier reports (Battista and Almond, 1973; Reker and Wong, 1988) (Ryff and Singer, 1998). They identified meaning in life to range from coherence in one's life to goal directedness or purposefulness. Therefore, it was not surprising that meaning in life significantly predicted the career components in this study.

The confirmation of the hypotheses as stated found support from Bandura's socio-cognitive theory as explained by Lent, Hackett, & Brown (1999), and Lent (2000); and self-efficacy model of Hackett and Betz (1981) which explained the processes that guide career development perception and career choice using both cognitive-person variables. As found, Lent et al's adoption of the socio-cognitive theory to explain how people develop occupational interests, make occupational choices, and achieve success at work have aligned with the career development factors examined. They found relationship among the three cognitive-person variables of self-efficacy, outcome expectations, and goals. Bandura (1986) had earlier reported them as key factors that interact to influence behavior. The implication of the socio-cognitive theory in this study is that individual factors can play significant roles in workers' plans. These lent support to our study that found career development being predicted by the cognitive variables. There was no negative prediction on any of the factors. It is an indication of strong association between career development perception and the factors of influence.

An interesting conclusion that can be drawn is that the cognitive appraising factors are important in the factory workers' perceived career development needs. The factors do influence career decision self-efficacy, career salience, career aspiration as well as career commitment positively. These show that employees' career development concerns depend on their socio-cognitive development. Therefore, attention to the meaning in life and work-value orientation and identity are salient in how employees perceive attainment of optimal career development as a need in organizations.

A major implication of these findings and conclusions drawn is that employees are sensitive to their needs in a technologically driven manufacturing. There is need for management of organizations to be considerate to the factors that have been found to predict perceived career development. Factory workers that were covered in the study are as concerned about career development as students, teachers and others that were covered in previous literature. The outcome has further supported the long held Alderfer's ERG theory of motivation that growth need is central to employees in their job. In order to foster commitment and productivity, organizations are encouraged to promote policies that enhance factory workers' career development concerns based on practices that consider their cognitive appraising factors. It has become necessary because it provides opportunity for career development as a growth need. It would stimulate commitment among factory workers as previously reported by Agba, et al (2010) in their findings that established positive relationship between career advancement opportunities and employee commitment.

However, there is the need for future researches in the area of career development as an important part of growth needs by expanding the scope in workforce coverage. Additionally, studies need to ensure more female workers are covered. That would enhance generalization of findings. Nevertheless, the outcome of this study has added to the literature on career development which rarely covers factory workers who are as essential as any other group in the workforce. It has brought to fore, the relevance of considering the cognitive variables that were covered which have not been well reported in their combined influence on employees' career concerns. Perhaps, a notable outcome is that perceived career development as a growth need is important enough to deserve increased attention in organizational development.

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Appendices

Table 1: Hierarchical multiple regression results showing career aspiration by meaning in life, work value orientation predicting work-based identity

| Variable | Predictors | β | t | P | R | R ² | F | P |
|-------------------|------------|---------|------|------|-----|----------------|-------|------|
| | MIL | .19 | 4.52 | <.05 | | | | |
| Career aspiration | WVO | .48 | 9.17 | <.05 | .79 | .64 | 172.9 | <.05 |
| | WBI | .23 | 4.90 | <.05 | | | | |

Keys: MIL= *Meaning in life*; WVO= *Work value orientation*; WBI= *Work-based identity*.

Table 2: Multiple regression results showing the prediction of career decision self-efficacy by meaning in life, work-value orientation and work-based identity

| Variable | Predictors | B | t | P | R | R ² | F | P |
|-------------------------------|------------------------|-----|------|------|-----|----------------|-------|------|
| Career decision self-efficacy | Meaning in life | .25 | 4.50 | <.05 | | | | |
| | Work-value orientation | .41 | 6.88 | <.05 | .72 | .53 | 108.5 | <.05 |
| | Work-based identity | .17 | 3.05 | <.05 | | | | |

Table 3: Multiple regression results showing the prediction of career development factors by meaning in life, work value orientation and work-based identity

| Variable | Predictors | β | t | P | R | R ² | F | P |
|---------------|------------|---------|------|------|-----|----------------|------|------|
| | MIL | .15 | 2.54 | <.05 | | | | |
| Career devpt. | WVO | .40 | 6.47 | <.05 | .70 | .48 | 92.1 | <.05 |
| | WBI | .24 | 4.22 | <.05 | | | | |

Keys: MIL= *Meaning in life*; WVO= *Work value orientation*; WBI= *Work-based identity*.